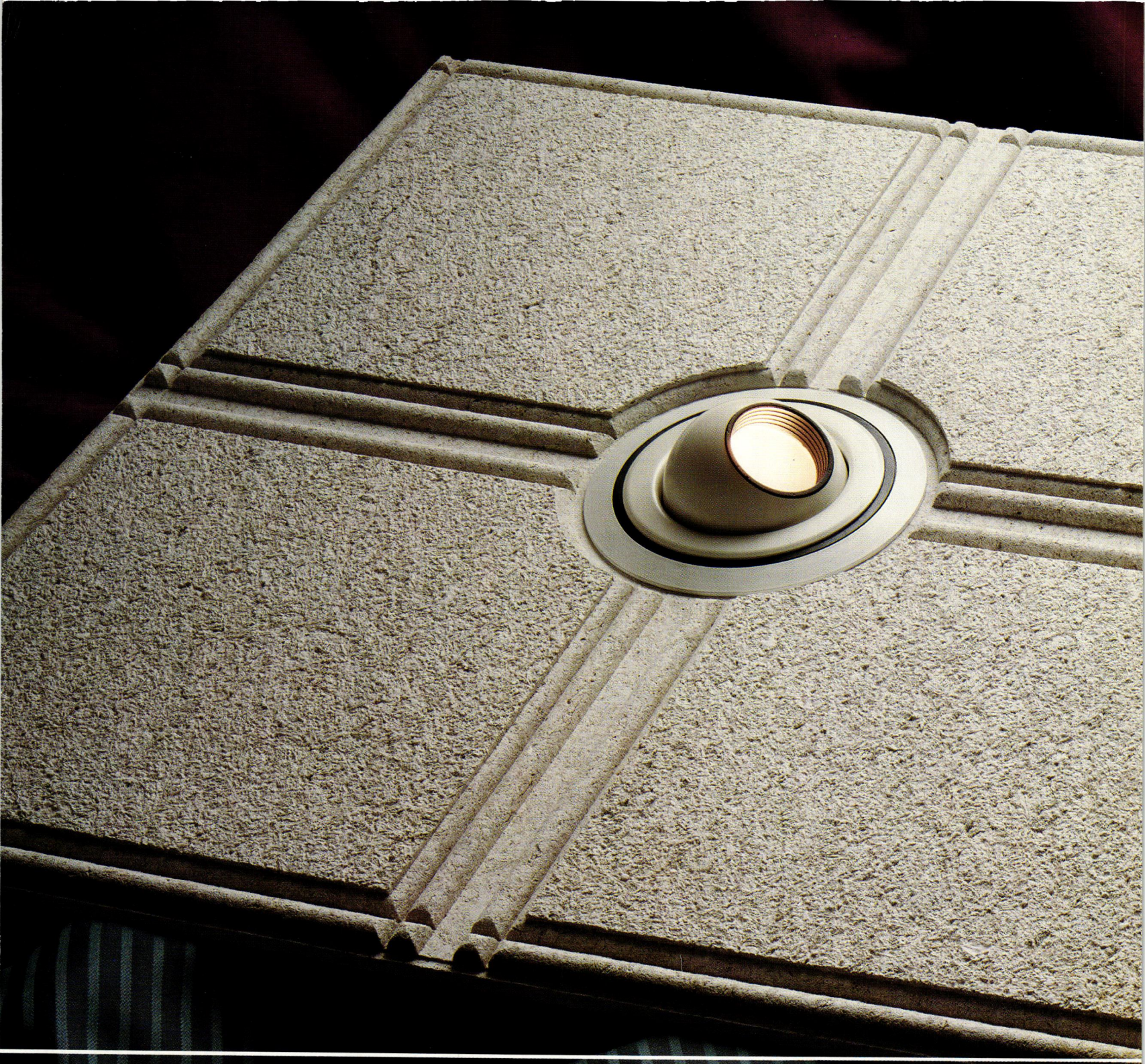
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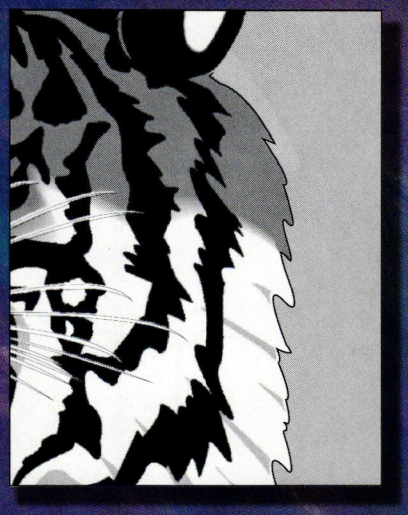
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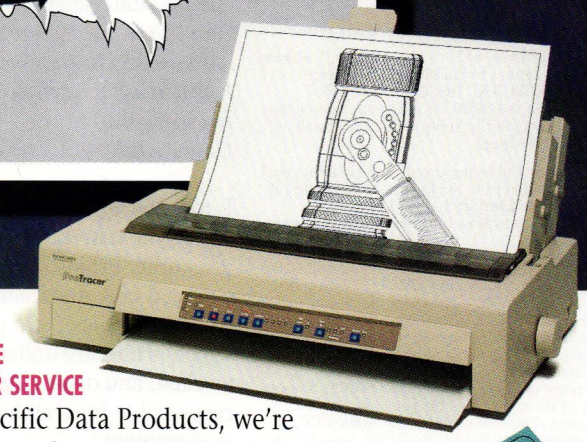
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Letters

Tunnel vision

Congratulations on raising and exploring the question of how architecture is judged ["Judging Architecture: The Dangers of Tunnel Vision," RECORD, January 1992, page 9]. I certainly support your view that none of the yardsticks you cite be elevated into the "dominant methodology."

But my concern is more fundamental: that most of the profession's award programs embrace few of the yardsticks you cite at any level of importance. Until that pattern changes, and work is judged on the broad criteria you've begun to identify, and the media publish and celebrate those results, we will continue to earn the criticism of being disconnected with clients' and society's realities.
Lou Marines, President
Advanced Management Institute for Architecture and Engineering
Corte Madera, California

I, too, share your criticism of tunnel vision in architectural discourse. I think you are posing a very timely question: What are the "new ethics" of a profession which is already underpaid, overworked, and disproportionately responsible for shaping the built environment?

I agree that context is very important. But that raises another timely question: the political boundaries within which the architect must work without having control of the "building process." Technology, disabled accessibility, depletion of rain forests, etc.—all of these issues must be contextualized, and given value accordingly. Even so, the theoretical interest is not in what you describe as "tunnel vision." The real issue is how architecture, in this new age, must reclaim the territory of public debate and its importance to the plight of our cities. Are we so starved for jobs that we will sell our souls to a developer to do a project that has little cultural contribution? What are the new principles for architects in the future? That is the question.
Milton S. F. Curry
Assistant Professor
Arizona State University
School of Architecture
Tempe, Arizona

Hostos Community College

The publication of the Allied Health Facility at Hostos Community College by Voorsanger/Hirsch/Danois Architects ["Street Life," RECORD, February 1992, pages 88-93] makes no reference to the overall master plan prepared by our office. It implies that Voorsanger & Associates linked the facility to the opposite buildings via a bridge spanning the Grand Concourse. It also implies that they alone created the Community College which earned an A+ for its contribution to the South Bronx.

For the record (pun intended): our office, in association with Sanchez & Figueroa Architects, were retained by the City University of New York to prepare a master plan for all improvements at Hostos. Fundamental to the master plan was to encourage extensive community use of the street-level facilities. Voorsanger/Hirsch/Danois received the commission to render services on the Allied Health Center within the context of our master plan. Our office was retained to develop the bridge and mixed-use facilities on the eastern side.
Robert Siegel
Gwathmey Siegel & Associates
New York City

Calendar

April 7-September 30
"Making It Work: Pittsburgh Defines a City," National Building Museum, 401 F Street N. W., Washington, D. C. 202/272-2448.

April 13-May 8
"The Vitra Museum, Basel, Switzerland, by Frank O. Gehry and Associates," Gund Hall Gallery, Harvard University Graduate School of Design, Cambridge, Mass. 617/495-4731.

May 5
"The Reality of Innovation: A Critique of the Building Process," symposium organized by Building Arts Forum/New York, at Cooper Union. Speakers include Wolf Prix, Matthys Levy, Marvin Botwin, Frederick Smith, and Kenneth Frampton. 718/472-8038.

May 6-8
"LightFair International," Jacob Javits Convention Center, New York City. 404/220-2115.

May 14-15
"Universal Design: Access to Daily Living," a conference sponsored by Pratt Institute's Center for Design Research, Cooper-Hewitt Museum, and Department of Rehabilitative Medicine, Columbia University College of Physicians and Surgeons. 212/838-6033.

June 1-12
"Earth Summit," the United Nations Conference on Environment and Development (UNCED); with "Global Forum," concurrent meetings and exhibits. Rio de Janeiro. 212/963-5959.

June 19-22
"Exploration '92: Engaging Society in Vital Ways," 124th annual AIA convention. Hynes Convention Center, Boston; 202/626-7395. "Celebrate Architecture" is a program through June of exhibits and lectures sponsored by the Boston Society of Architects. 617/951-1433.


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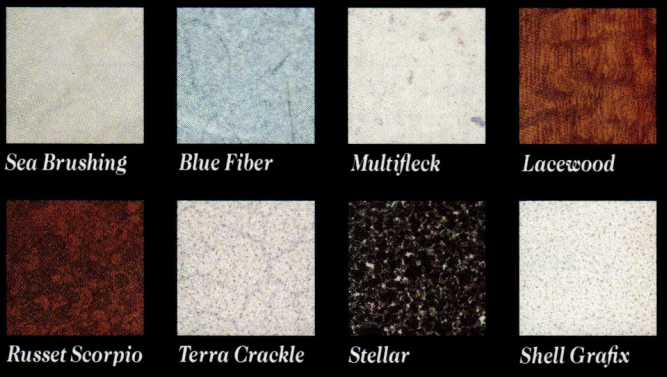
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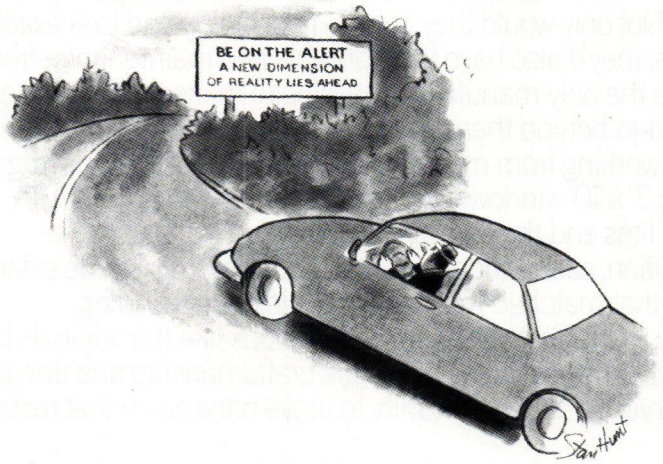
Eschewing Obfuscation: Ideas for Cleaning Up Our Language Act

Not long ago Peter Blake, architect, editor and teacher, told me a first-hand story about the philosopher Bertrand Russell, who is said to have complained that he was never taken seriously in this country because his writings were too easy to understand. I have been convinced for years that the architectural profession is doing everything it can to prove him right by being as obscure as possible. Oblivious in too many cases to their obligation to tell the facts plainly to the client, to the public, and to others who would love to learn more about architecture if they could only understand the jargon, architects invent new jargon every Monday morning, or borrow strange terms from such fields as literary criticism or high-tech computerspeak.

Just last month a press release arrived on my desk from Rice University announcing a memorial symposium in honor of the late architecture dean Paul Kennon. I quote this especially occult passage: "The themes . . . include . . . the role of contextualism versus disruption or critique; the relation between architecture and 'event'; the notion of environmental determinism with regard to social practices; the possibility of oppositional urban space; and the emancipatory potential of architecture." I hate to think what Paul would have made of this gobbledygook. Then came an invitation to the opening of an exhibit by the Austrian architect Gunther Domenig, which describes a house as "a fracturization of rocks into crystalline surfaces, as if the waves of lakes had given them both their openness and smoothness." I don't think I'll go.

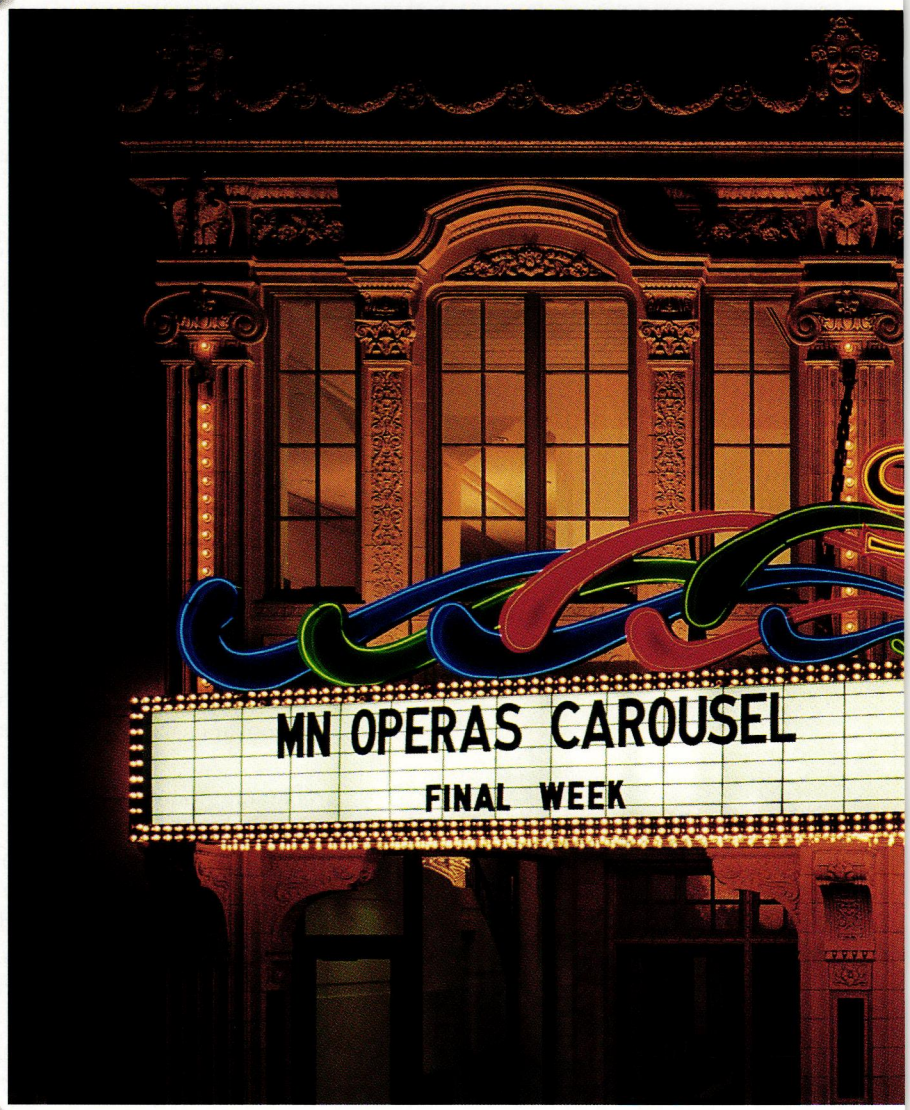
The magazines—RECORD no doubt among them—aren't innocent. Last year I headed off at the pass the following gem—a reference to a project's *iconographic roots,* which caused me to ask whether the writer was referring to some new species of radish. The barrier to clarity more often than not consists simply of needlessly long words and long sentences. To measure the clarity of a passage the late Robert Gunning invented the Fog Index. You select a 100-word passage, count the number of words of three syllables or more, the average number of words per sentence, add the two and multiply by 0.4. The resulting Fog Index of your passage corresponds to the number of years of schooling needed to get the meaning. The Fog Index of the *Atlantic* is said to be 12, of *Time* magazine 10.

It isn't a sign of cleverness to be misunderstood. Every architect should be on the alert for signs of obfuscated communication. Any reader who comes across a gem is invited to send it to me at RECORD. I may share the best ones for a little light reading by all. *Stephen A. Kliment*



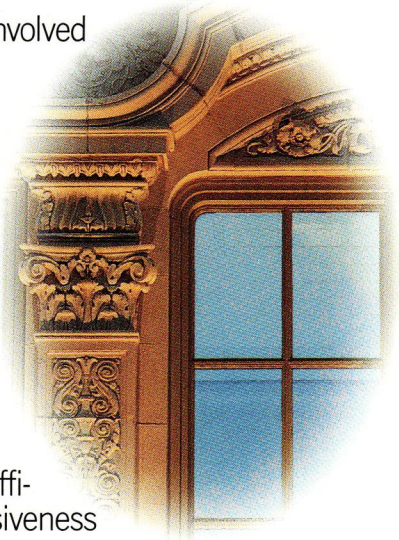
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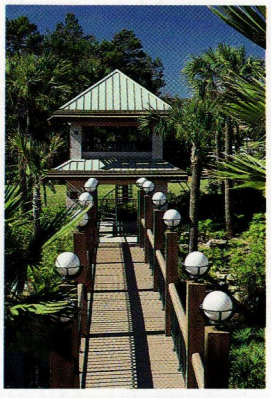
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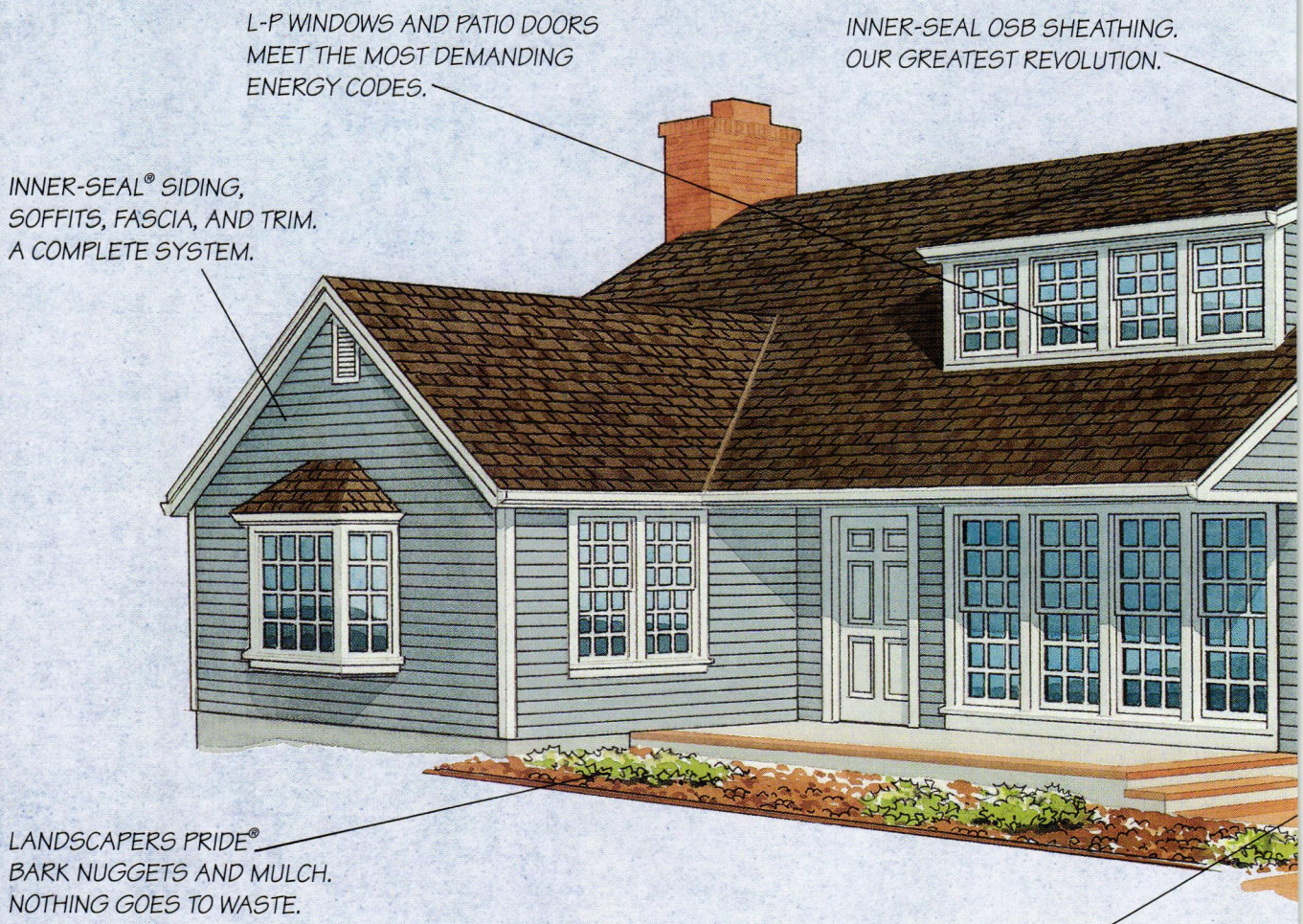
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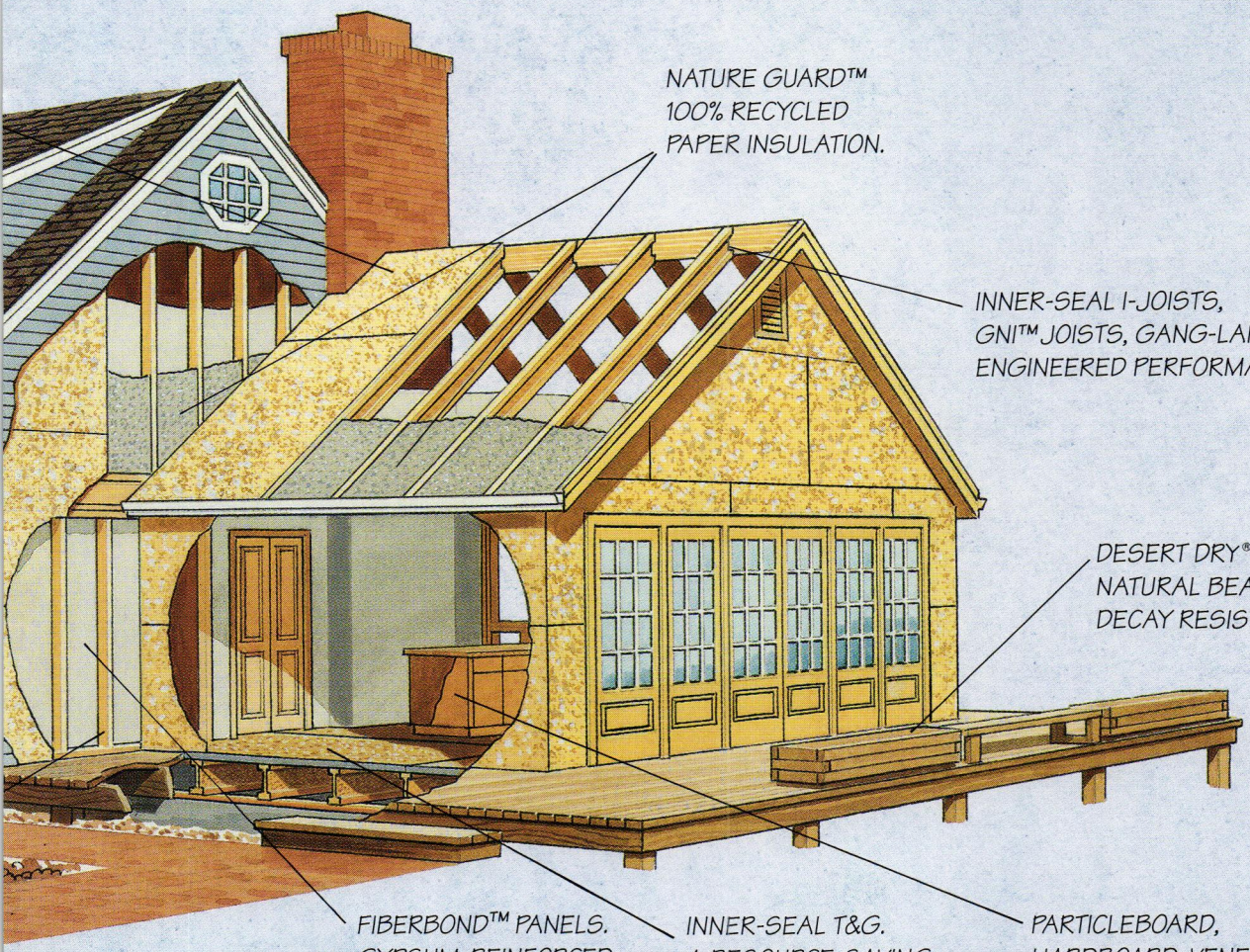


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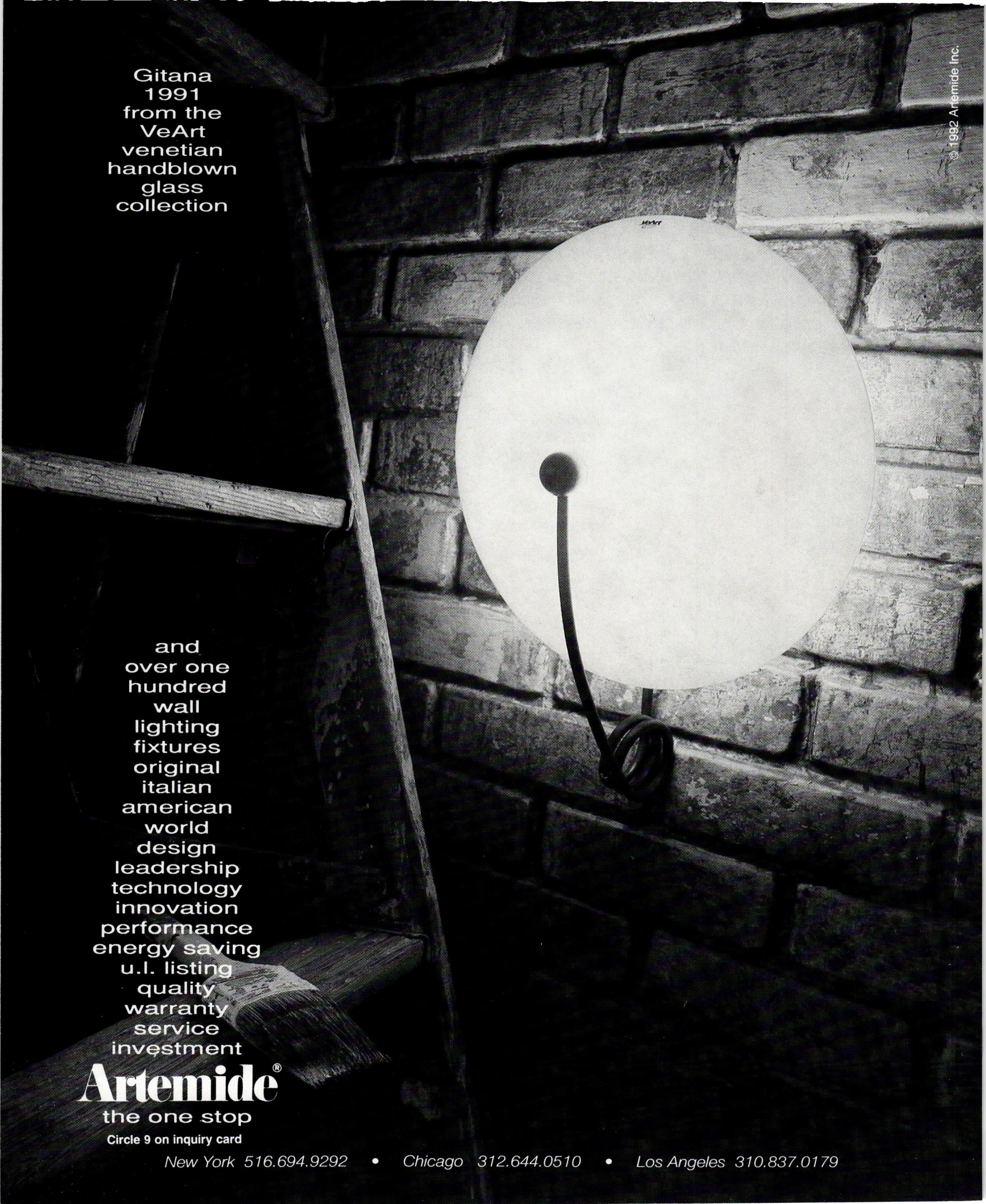


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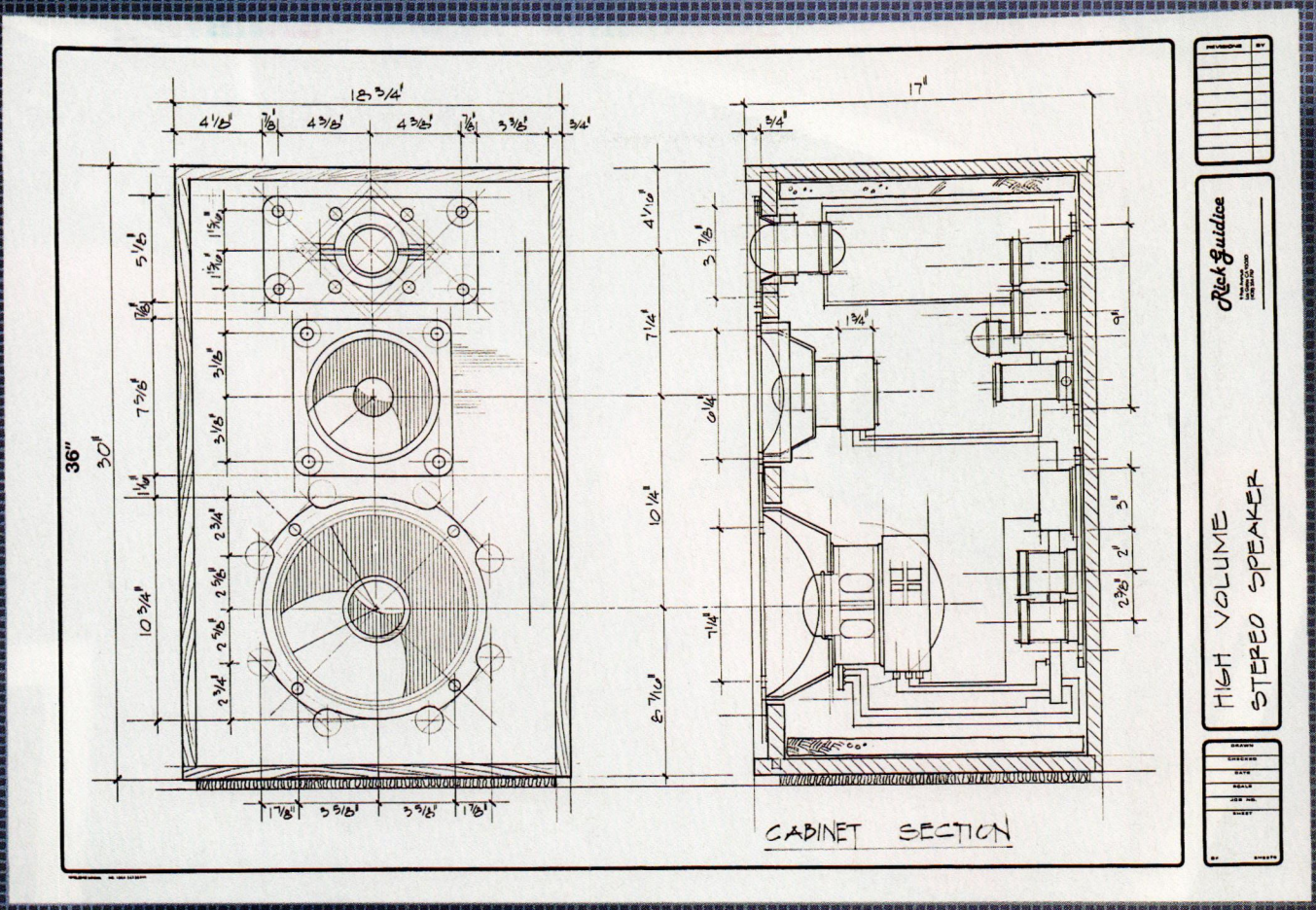
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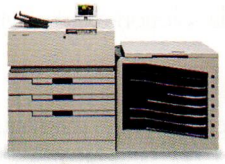
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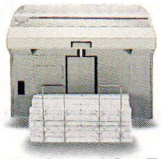
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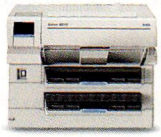
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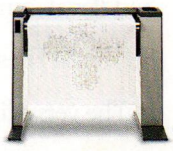
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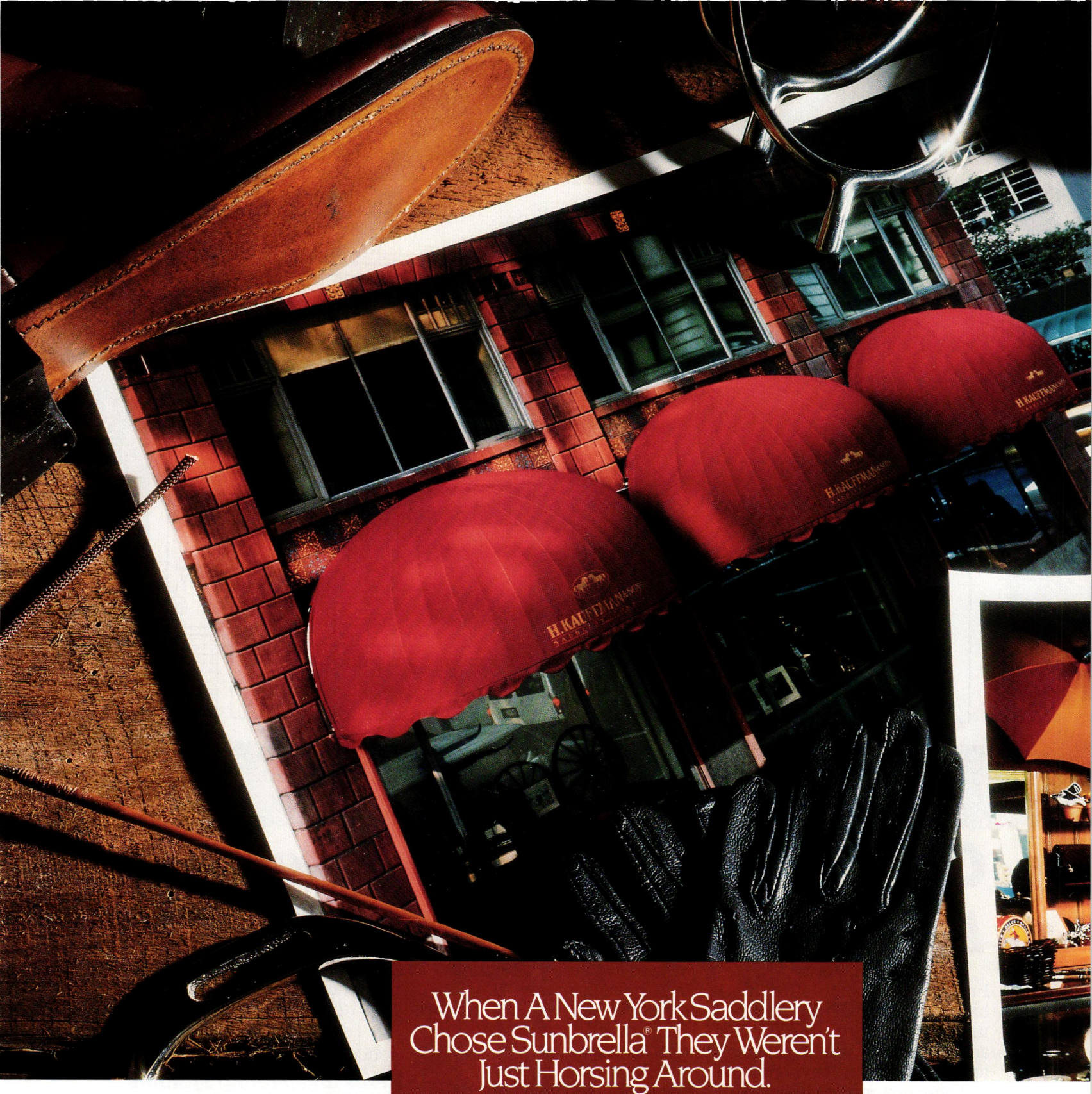
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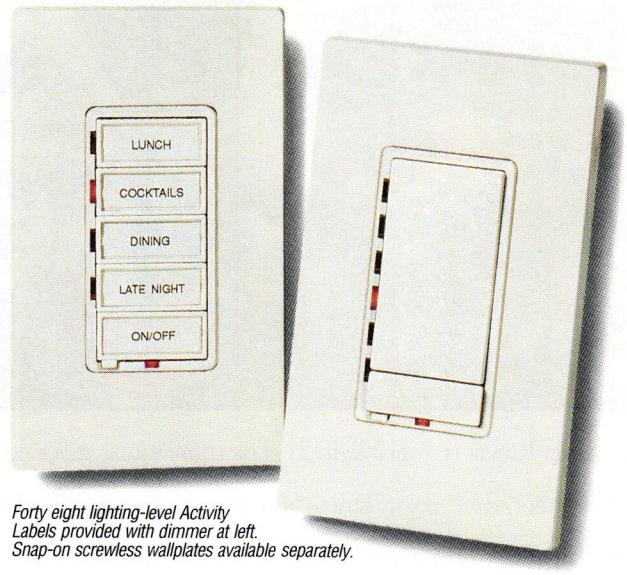
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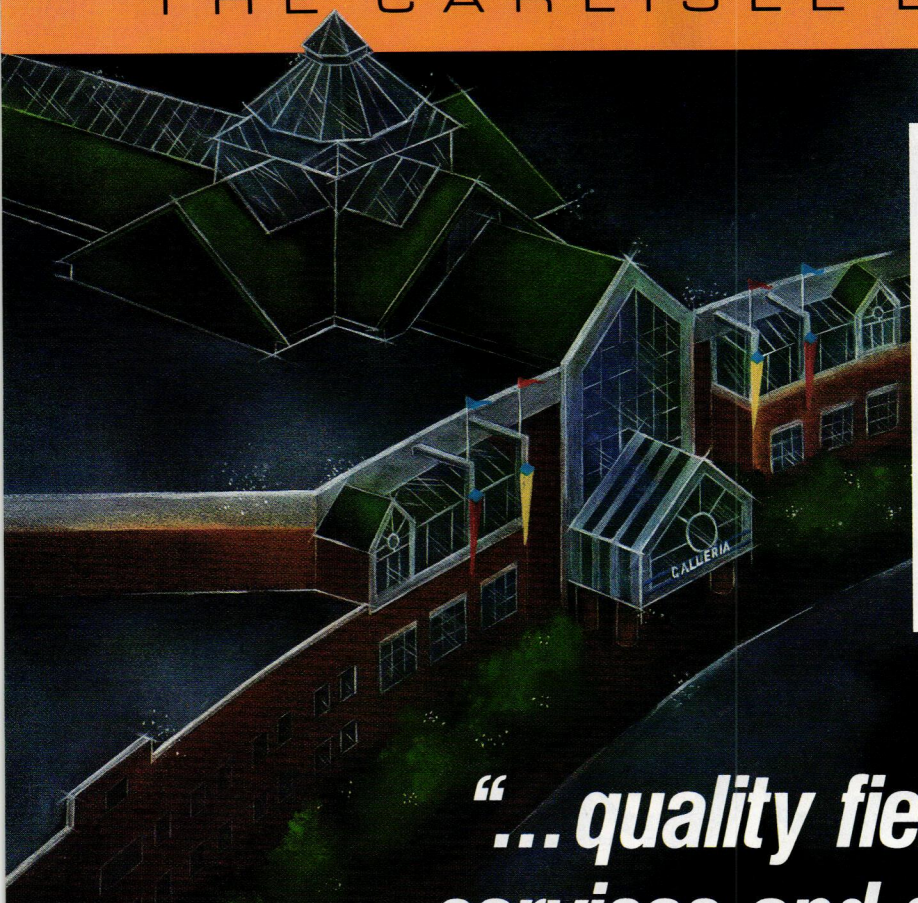
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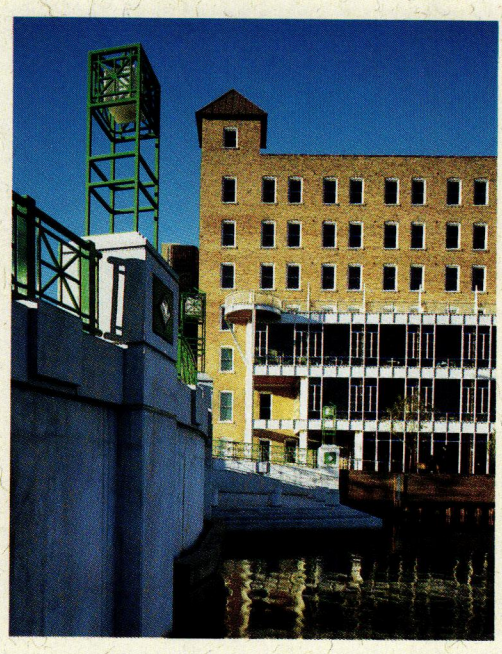
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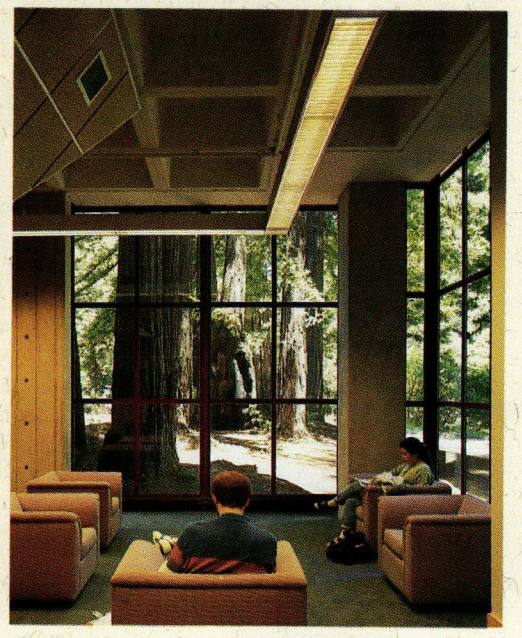
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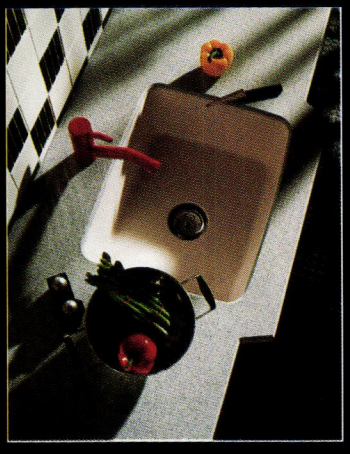
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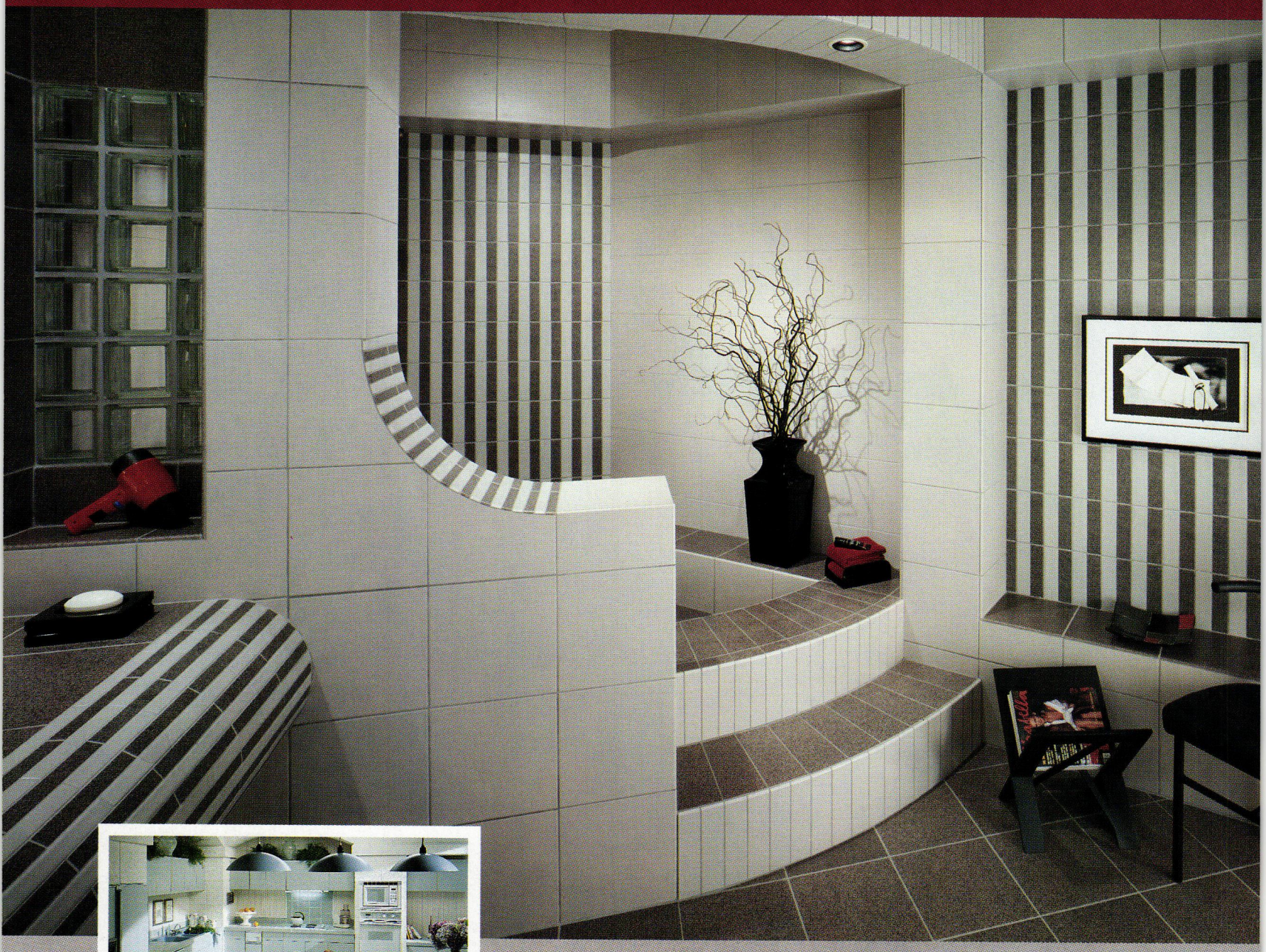
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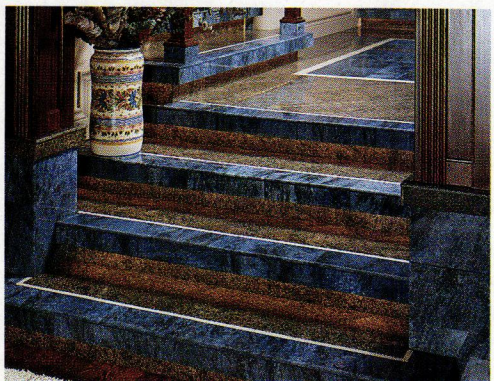
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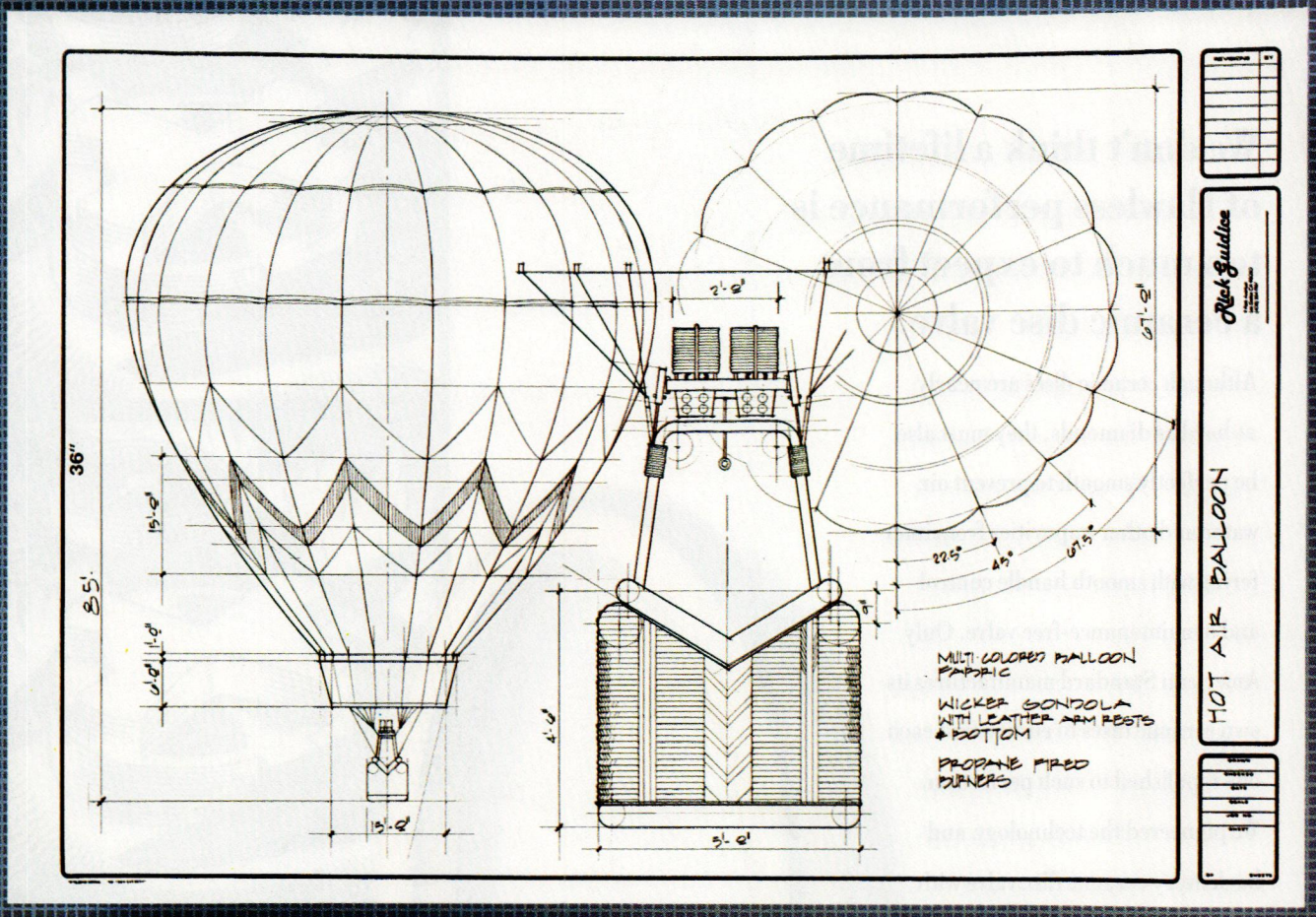
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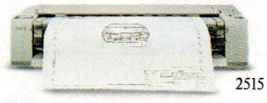
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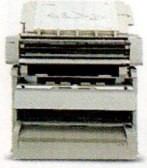
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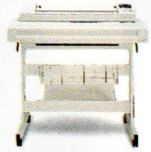
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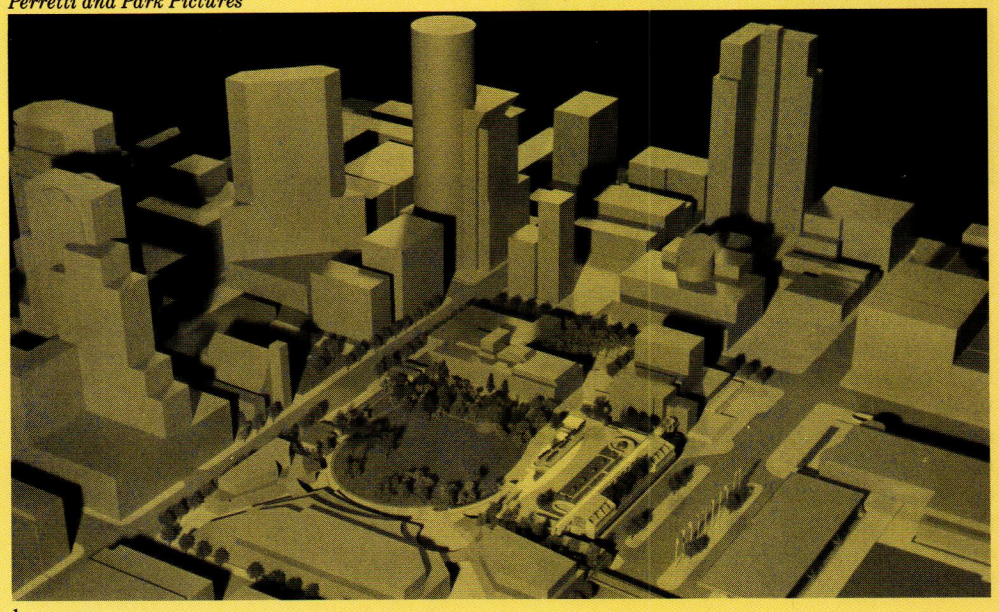


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San Francisco

Yerba Buena Gardens: Buildings in Search of a Plan

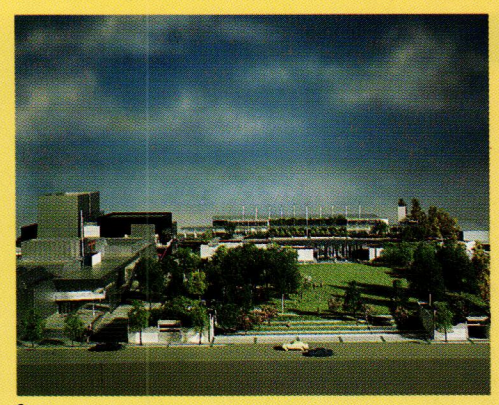
Perretti and Park Pictures



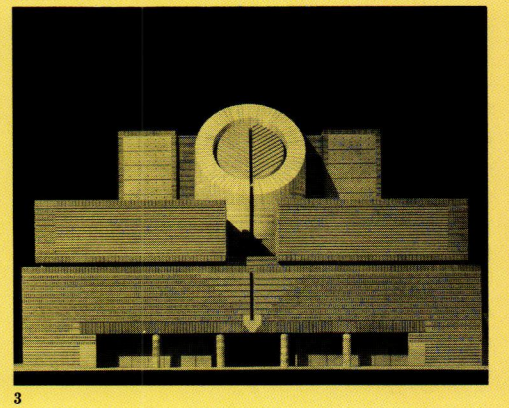
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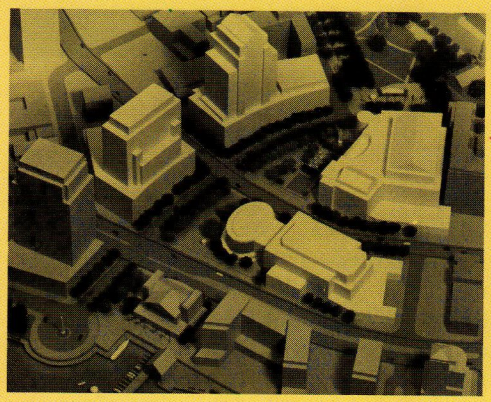
What is remarkable about plans for Yerba Buena Gardens, a 25-acre cultural and commercial project under development in downtown San Francisco *(1)*, is that it gives absolutely no impression of having been planned. What was foreseen as an 800-acre "new city" rising out of the slums of the South of Market area has become a loose collection of arts and convention facilities surrounded by a few office buildings and hotels, the result of nearly 20 years of proposals and compromises. When asked to explain the rather understated forms of his new Center for the Arts, a 55,000-sq-ft exhibition and performance facility, architect Fumihiko Maki excused himself by pointing to the design process: "We didn't have the Napoleon III of Paris, nor did we have the Michael Eisner of Los Angeles—we had to work with the city of San Francisco."

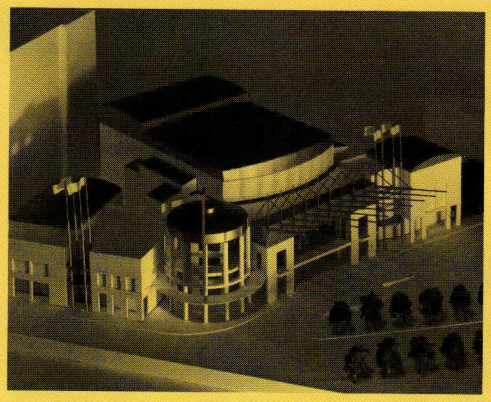
Maki, James Stewart Polshek, who designed the Center for the Arts Theater next door, and Romaldo Giurgola, who is drawing up a sweeping lawn behind both buildings *(2)*, all had to work on top of an extension to the giant Moscone Convention Center. That cavernous, but invisible, project is the real engine of this new "center for popular culture," as Polshek called it. Mario Botta has designed a 200,000-sq-ft Museum of Modern Art *(3)* just across the street as part of this complex, and office towers have been designed by James Ingo Freed *(4)* and Cesar Pelli. The towers reinforce what Freed calls the "Chinese Wall" of Market Street.

Even at a small scale, the plan remains haphazard. Nonetheless, each of the buildings is well worked out and elegant in composition; Giurgola's park forms a welcome oasis of green amid the density of downtown. The facilities will offer new venues for arts groups and give the cramped museum needed space. Someday, Yerba Buena Gardens might even rate up there with the Transamerica Tower as one of the great tourist attractions of San Francisco. *Aaron Betsky*

New Jersey

Barton Myers Unveils Newark Performing Arts Center

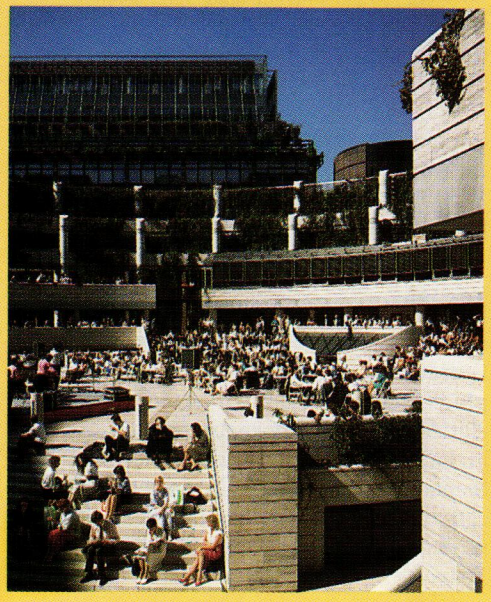




The tug-of-war between New York City and neighboring New Jersey has traditionally centered on industry and jobs. In late February, that focus shifted to cultural affairs when the city of Newark, drawing a bead on Manhattan's Lincoln Center, unveiled architect Barton Myers's design for the first phase of the $145-million New Jersey Performing Arts Center. The 12-acre site was masterplanned by SOM and James Stewart Polshek (left). The complex will surround Theater Square, a proposed public plaza that is key to the center's expected role in revitalizing Newark's central business district. The initial building in the Myers design contains a 2,700-seat theater and a 500-seat repertory/concert hall, two restaurants, banquet hall, and gift shop (right). Anchoring the hall is an 85-foot-high terra-cotta and glass rotunda, well-lit from within to project warmth and draw crowds from the square. Parking is just beyond the site in an underground lot below an existing park near Newark's waterfront. Funds (and land) are still being collected for a hoped-for groundbreaking in late 1993. ■

United Kingdom

Development Rates "President's Choice"



Things are simpler at the Royal Institute of British Architects. To award the association's top design honor, president Richard MacCormac merely chose one building from a short list of six. The 1991 winner consists of the first four phases of the $3.5-billion Broadgate, a financial center under way on a nine-acre site near Liverpool Street Station in inner north London. Architects are Arup Associates. Offices, shops, and restaurants are arranged around a newly created public square (left), which is used in summer for concerts, exhibitions, and outdoor theater, and in winter for ice-skating. In the master plan the offices are broken up into four buildings, each organized around an atrium. The buildings are stepped back at the top, and contain landscaped terraces. Vehicles circulate underground to free up the newly created streets for pedestrian traffic. ■

Design

Briefs

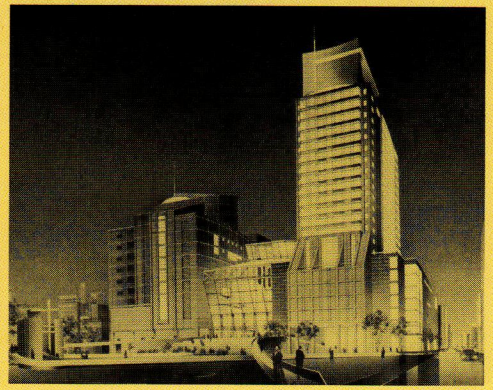
Whitney scraps Graves plan
A 10-year effort to design a major expansion of Marcel Breuer's 1966 building for the Whitney Museum of American Art in New York City has been abandoned by the museum. A series of Postmodern schemes put forth by Michael Graves consistently met stiff opposition from the Upper East Side community and from champions of the purity of Breuer's rugged composition ["Doing the Right Thing," RECORD, January 1992, pages 86-89].

Practice makes (Post) perfect
The first issue of *Practices*, a publication of the Center for the Study of the Practice of Architecture at the University of Cincinnati, will feature what promises to be a tell-all interview with Peter Eisenman "concerning his approach to architectural practice."

O. Jack Mitchell Dies at 60
O. Jack Mitchell, who taught at Rice University's School of Architecture for a quarter-century and served as its dean and director, died at his Houston home in February.

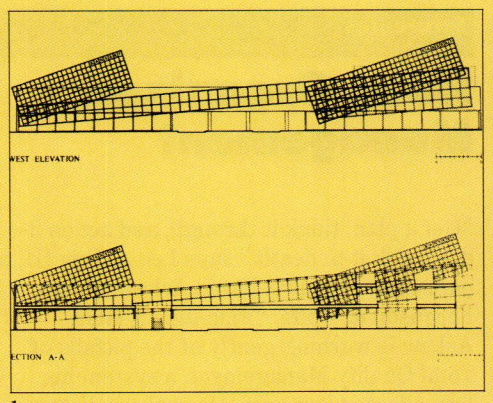
Competitions
The American Society of Architectural Perspectivists (ASAP) is calling for entries in "Architecture in Perspective VII" (deadline, May 1), its seventh annual exhibition. ASAP, 320 Newbury Street, Boston, Mass. 02115; 617/846-4766.

U. S.-Japan team wins competition
A joint-venture design by Kaplan/McLaughlin/Diaz of San Francisco and the Japanese firm of Kaiken Sekkei of Nagoya has won a competition for a $350-million, 1-million-sq-ft International Design Center in the city of Nagoya. The complex includes a 14-story public tower with a theater and a 23-story office and retail tower joined by a 165-foot-tall atrium. ■

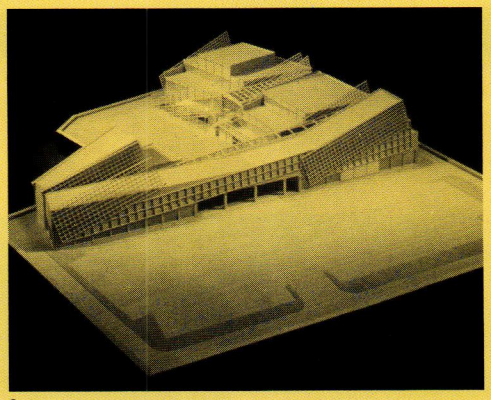


Japan

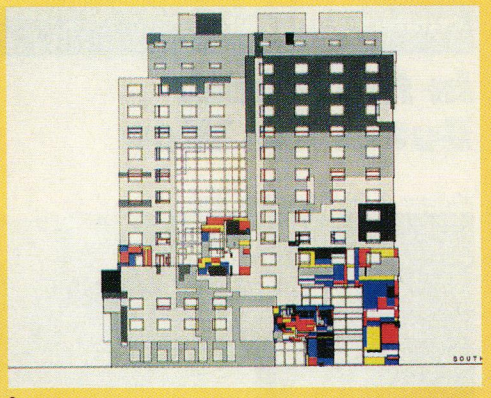
Tigerman McCurry Plans Superstore and Luxury Hotel



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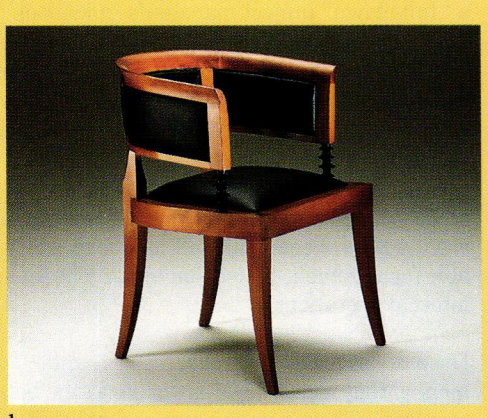


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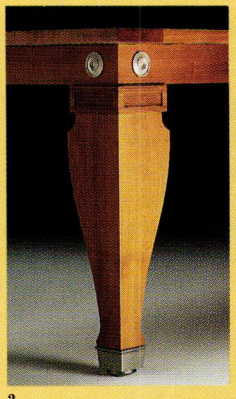
Americans may think the Japanese avoid discount stores for luxury haunts like Tiffany & Co. But Kanseki, or K-Zone, is a popular Japanese version of K-Mart. Starting with this flagship store by Tigerman McCurry Architects of Chicago, located across the street from its corporate headquarters on the outskirts of Utsonomiya City, the company is preparing a rapid expansion with departments offering housewares, pets and pet supplies, automotive and bicycle services, and fast food *(1,2)*. Because of its conspicuous site on an elevated highway, ready access by car was a major factor in the program, as well as a layout that could be quickly read and understood by those driving by. Each of three segments of the poured-in-place concrete structure, overlayed with aluminum storefront grids, is given a distinguishing color that also acts as signage. The store can be expanded by adding to the shorter of two wings. Construction is to begin this fall. Tigerman McCurry is collaborating with Semba Architects of Tokyo. In addition to K-Zone, Tigerman McCurry acted as consultants in designing the facade of the proposed Park Lane Hotel, a 14-story, 220-room hotel in downtown Kyoto *(3)*. The hotel's glazed-tile elevations are a response not only to the context—an empty, L-shaped piece of a downtown "superblock"—but also to the previously established interior plan of the building, which was developed by the Japanese firm of Daiken. The facades, says Tigerman, "delineate the areas of focus" both within the hotel and on the exterior, such as a two-story teahouse, a health club, and commercial spaces. ■

Furniture

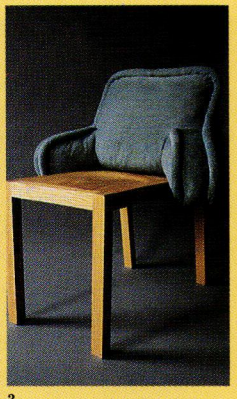
Table and Chair by Krier; Rearranged Pieces from Beyond Sears



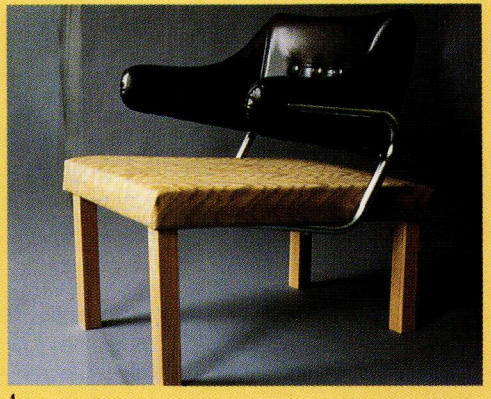
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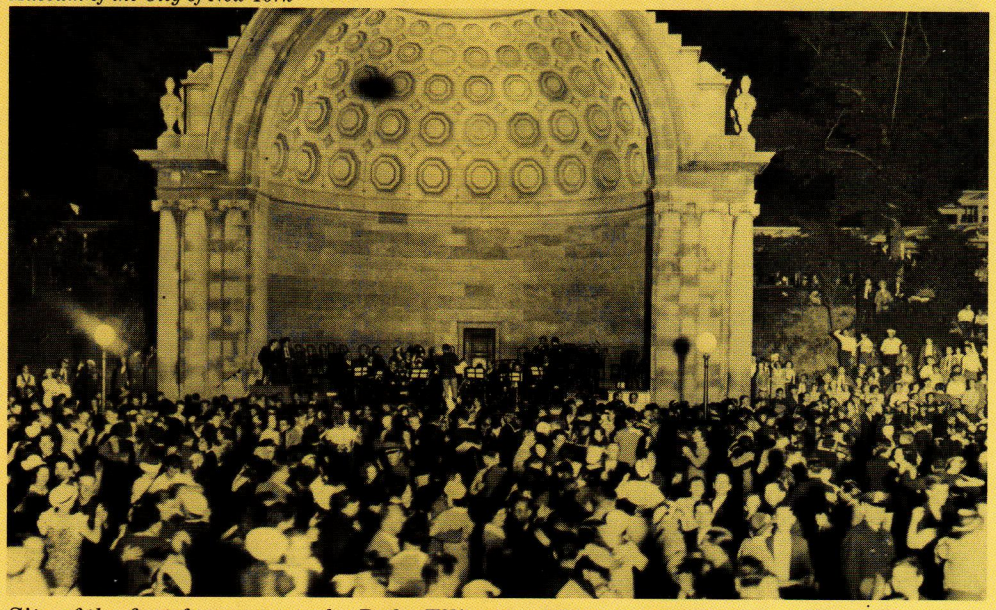
4

Two distinct approaches to furniture design: Leon Krier *(1,2)* finds it useful to separate table and chair; New York-based Russian emigré architect Constantin Boym doesn't *(3,4)*. Krier found designing furniture to be "more like sculpture," but was so taken aback to see his drawings for Italian furniture maker Giorgetti in three dimensions *(1,2)* that he asked the manufacturer to stop production. (It refused.) Others may make that request of Boym, who recently exhibited prototypes of what he calls "Searstyle" furniture, Sears catalog items that are dismantled and reassembled with other components. This union of mass production and individual quirk, says Boym, "could establish a design direction for the next century." *P. D. S.*

Architectural Resources

In the Mood, But in the Way

Museum of the City of New York



Site of the first free concerts by Duke Ellington (photo) and many other famous musicians, the Naumburg Bandshell, given to New York by music supporter Elkan Naumburg in 1923, is now being called "too big, assertive, and in the wrong place."

"We just want to stick to Mr. Olmsted's beautiful plan," says Elizabeth Barlow Rogers. She is head of the privately funded Central Park Conservancy, which intends to demolish the publicly owned bandshell—for a cost nearing $100,000—because it was not in Olmsted and Vaux's 1859 plan. That is, if one of several interested municipalities outside New York City does not make a definite offer to move it before June 18. Moving it won't be easy; its walls are heavy poured concrete and the whole structure is clad in thick carved limestone.

When built, it was said by the arts magazine, *International Studio,* "to embody the highest achievement in the science of acoustics"—an attribute still given by musicians and their organizations, including some from around the country. Captain Kenneth Force, director of music at the U. S. Merchant Marine Academy, has said he will lie down in front of the bulldozers. A 1923 *New York Times* article cited sensitive placement into a hillside off the Mall by architect William Tachau that reduced apparent size. Therein lies the problem. In the original design, the hillside was part of a Mall crossaxis that started with the long-gone Central Park Casino at the top, led to a modest wisteria pergola at the plateau's edge for viewing longer-gone ladies and gentlemen on the then-named "Promenade" below, and ended with an acoustically marginal bandstand on the *opposite* side. Now, the one remaining structural element, the twice-rebuilt pergola, is blocked from view for almost a quarter of its length by the bandstand. That is the most cogent reason the Conservancy wants demolition. "It was only one of many options in a Rogers-era master-plan," explains plan author, architect Gerald Allen. None could completely restore the original plan because of a host of new park uses and resulting new buildings far more intrusive and less elegant than the bandshell. "Wanton destruction," says preservation architect Giorgio Cavaglieri. *Charles K. Hoyt*

Strategies

Now, Organized Management

"Get a plan, think it through, and act on it—don't talk it to death," says Lee Askew III, a partner at Memphis-based Askew, Nixon, Ferguson & Wolfe. "Fine-tune it later." Askew is warning gently of the pitfalls of Total Quality Management, a system his firm adopted last year. He spoke in February at the third annual Quality Management Conference of the Design & Construction Quality Institute (DCQI), held in Orlando last February. [See "Total Quality Management Gives You that Competitive Edge," RECORD, February 1992, page 9]. Askew's warning is actually a hearty endorsement. TQM has "real substance," he says.

Askew's enthusiasm is shared by Mike Dattilo, a partner at Page Southerland Page, (PSP) in Dallas, who was also a panelist at DCQI. Both spoke forcefully about how the process has increased—and continues to boost—efficiency and reduced waste in everything from change orders to fees. Each stressed that TQM has to start from the top down."This couldn't happen without the total support and commitment of this firm's senior partner," says Dattilo. Yielding new tools like a "full-blown" project manager's guidebook, TQM has helped Askew's firm to "streamline and standardize" operations. "Now we can do it once, do it correctly," says Askew, "there's not a lot of redundancy." Askew refers wryly to the firm's "alligator list—it keeps things from biting you." He claims that broadly computerized survey mechanisms, along with weekly time sheets and staff meetings, enable management to keep on top of jobs and internal operations.

Despite hefty costs in time, energy, and money, they agree TQM is visible at the bottom line. "There's no mirrors and polish," says Dattilo, "but it's paying for itself already." A recent PSP job for Texas Instruments, a major client, came in under budget, ahead of schedule, and with "zero change orders." Says Askew, "We're daring ourselves to be profitable." *P. D. S.*

Public Places

Special-Needs Work Offers Opportunity for Architects

AIDS hospices for kids, care facilities for crack babies, shelters for homeless teens and battered women, extended day-care for one-parent families, support services for teen mothers: "There is work here," says William Worn, organizer of a February symposium on "New Opportunities in Architecture for Social Change," at the Chicago AIA, "although it may not be glamorous work." But what designing for the public and the private not-for-profits sectors lacks in glamour it makes up for in challenge, as one panel made clear. The Chicago firm of Johnson and Wilson used vinyl to create a "rug look" in rooms of a rehabbed family shelter where rugs wouldn't work, and employed a continuous wood chair rail as both decoration and as an orientation device for the blind.

The speakers also made clear that a changing world may require architects to change the way they work. For example, Deborah Moore of the Chicago Housing Authority—an agency that has spent $150 million on architecture and engineering in the last four years alone—spoke about the need to work in partnership with public housing residents, who "know more about these buildings than you and I will ever know." A local example is El Mercado, a small-business incubator described as the first public market to open in modern Chicago. It was designed by Peter Landon Architects, which renovated an existing supermarket with the advice of neighborhood Hispanic businessmen familiar with similar facilities in Mexico and elsewhere.

Surprisingly, the agency pros insisted that doing good did not necessarily mean do-gooding. Marc Haupert of Chicago House, an AIDS care facility, was not alone in noting that small nonprofit organizations are reluctant to push architects to change unsatisfactory designs when they donate their services. Instead, Haupert and others suggest that architects be paid, then asked to donate all or part of their customary fee *after* the fact. Backing up complaints that gentrification destroys rather than builds neighborhoods, Linda Hoke of the Legal Center for Disability Rights spoke most movingly about designers' larger responsibilities. "Depending on how you design buildings," she reminded the audience, "you can make people with disabilities contributing members of society." *James Krohe, Jr.*

Mr. Krohe is a writer in Chicago.

New Agendas

Fast Changes at AIA

"We want to make what architects produce indispensable and not merely indisposable," said University of Nebraska's architectural school dean Cecil Steward. This year's annual RECORD editors' lunch for the new president of AIA offered insights into the institute's agenda. To accomplish his platform, Steward intends to put architecture back on a footing with law and the other professions by emphasizing its mechanics instead of its art. He intends to start with the schools, by initiating a three-year study of how well they prepare students to cope with realities. He also believes architecture should be concerned as much with social issues as physical ones. The supplemental dues schedule is another target Steward is aiming at: he intends to mold the fees on the "cafeteria plan," so that "members pay only for what they take out." *C. K. H.*

Taxing Matters

IRS Seeks to Alter Hiring Practices

Should federal taxes, unemployment insurance, and workmen's compensation be withheld from the paychecks of temporary and freelance architectural employees, as is now required under the Tax Reform Act of 1986? Or should this increasing army of nonsalaried personnel be paid lump-sum fees and be allowed to file 1099 tax forms as independent contractors? According to David McFadden, whose firm, Consulting for Architects, is a leading architectural employment (permanent and temporary) agency, the present code places a burden on employers, raising payroll costs through paperwork and matching deductions, impedes cash flow, and threatens to reduce hiring.

The IRS's logic is that this prevents firms from illegally listing full-time employees as freelancers. But McFadden contends that the IRS's intention of flushing out concealed 1099 employees has had the effect of forcing some hiring underground: "A firm will hire an individual for a project, saying it's a permanent position, and can him when the project is done." McFadden and Douglas Korves, an architect on AIA's Government Affairs Committee, say the IRS is using 1099s as a trigger to audit architectural firms that file them. "It's a big problem," says Korves.

But Stephen Viscusi, a partner in DesignTemps, a placement firm he owns with Diane Barnes, Roz Brandt, and Jeffrey Osborne, warns of a different danger: "What happens if an employee on a 1099 gets hurt? Who's paying the disability?" Indeed, the joint refuges of unemployment insurance and disability are more than just comfort to architects seeking temporary work. And payroll costs for temporary workers are tax deductible when routed through an employment agency. "If you're doing business correctly and legally," says Viscusi, "it's a nonissue." Meanwhile, McFadden is pressing the AIA to lobby for a change in the tax code. *P. D. S.*

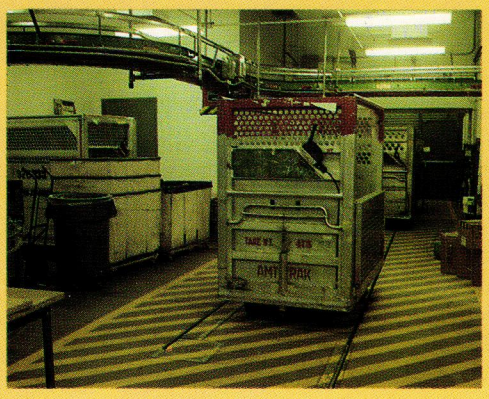
Library Design

Good Reading for the Blind









It's not just disabled access, but comfort and ease of use that are the hallmarks of the new Andrew Heiskell Library for the Blind and Physically Handicapped. This 43,000-sq-ft lending facility includes technical support for books-on-tape and an automated mail-order operation, all shoehorned into the lowest floors of a restored 12-story, turn-of-the-century landmark in New York City's Ladies Mile Historic District. New Jersey architect Dennis Kowal provided blind patrons with an instant sense of orientation on entering the enclosed lobby. Kowal shifted the circulation spine of the building off its symmetrical axis, placing the door on the right side of the entry bay, where it's most easily found. The lobby itself is 20 feet long, so that wheelchair-bound users have ample room to shed or put on coats and turn themselves around before entering or leaving the building. Once through a second set of right-hand doors, a handrail on the right leads visually handicapped patrons past the library reception desk (top) to stacks with Braille volumes (center left), books-on-tape, or to elevators. Suspended grids that vary in size with ceiling height diffuse shadow-free lighting indirectly; tabletop lamps supplement the overhead fixtures. Nonreflective surfaces reduce glare.

The public library takes up half of the first two floors. The rest is occupied by an automated mail-order warehouse for prerecorded books on tape (produced by the Library of Congress), soundproofed recording rooms, and repair facilities for the tape players. An automated storage and retrieval system circulates 2,000 tapes daily. Computers read photoelectric codes from the cassettes, and sort them onto conveyors, which deliver them to the proper floor within the library. Since 90 percent of returned tapes go out again immediately, they are shunted onto a spiral conveyor (bottom right) and stored on a carousel by computer (far left), which prints mailing labels for their new destination. *P. D. S.*

Technology

Publication Briefs

Wood Reference Handbook, by the Canadian Wood Council ($75), is a guide for all uses of wood in construction. What sets it apart from other handbooks is its unusually handsome presentation, not only of technical information, but also through stunning photography that reveals the numerous ways wood can be used. It references American standards and practices where relevant, and covers relatively new products like oriented strandboard and laminated veneer lumber. To order: 800/531-3122.

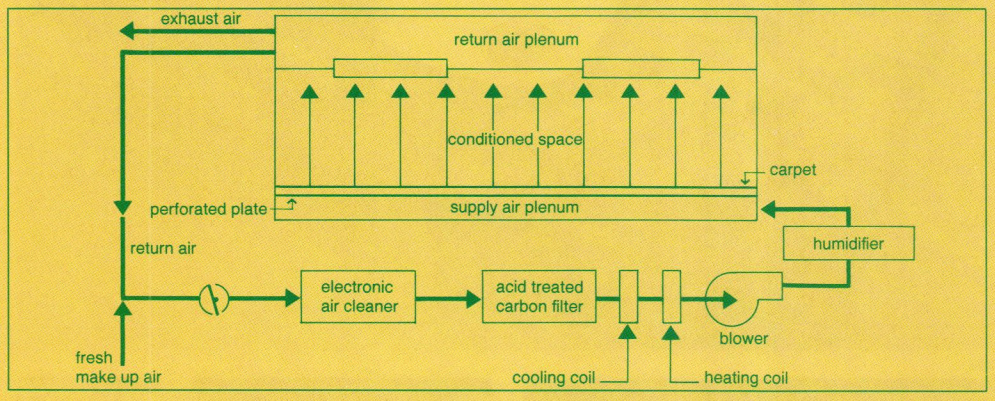
Mechanical and Electrical Equipment for Buildings, Eighth Edition, by Benjamin Stein and John S. Reynolds. New York: John Wiley & Sons, 1992. 1,627 pages, $67.95. Since this is the bible for many architects and students on mechanical, electrical, and plumbing subjects, the revisions in this edition, which focus on conservation and renewable resources, bear close study. Other sections have been updated to take into account recently developed computer-analysis methods and the spreading use of microprocessor-control devices.

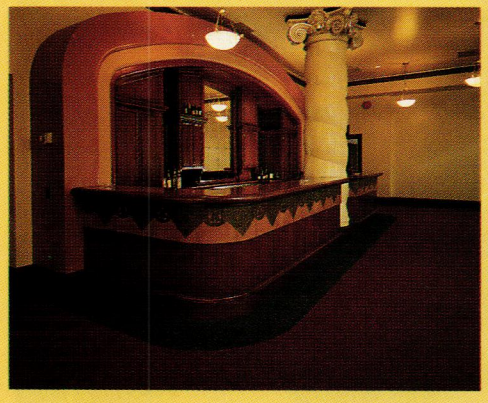
NRCA• CAD puts the standard details of the National Roofing Contractors' *Roofing and Waterproofing Manual* on computer disks ($200, members, $250, nonmembers). This gives CAD users a nonproprietary detail reference that represents the state of the art in roofing. The 126 details are compatible with typical CAD file types and can be viewed and transferred to other applications using Microsoft's Windows interface on IBM-PC type computers. Contact NRCA Marketing Services (800/323-9545).

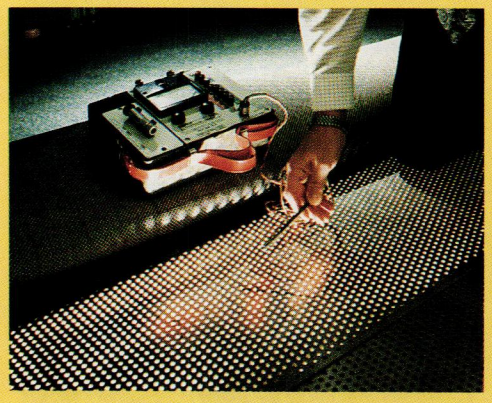
Means Illustrated Construction Dictionary. Kingston, Mass.: R. S. Means Company, 1991, 691 pages, $99.95. Do you need a $100 book to tell you the meaning of terms you use all the time? Yes, since too few people know the difference between, for example, expansion joints and construction joints. This volume also comes in handy when you've forgotten what builder's-risk insurance is. At 14,000 entries, it's the most comprehensive we've seen. ■

Air Quality

Getting the Smoke Out







Motivated by a certain amount of corporate self-interest, researchers for Philip Morris USA have developed an efficient ventilation-filtration system that markedly reduces airborne materials—including, second-hand smoke. Its relative simplicity and use of conventional equipment should commend the upflow displacement system, Filtered Air Control Technology (FACT), for healthcare, offices, and other commercial sites where occupants are sensitive to air quality. To demonstrate the system (which will likely be available without license) and show that it doesn't intrude on a room's appearance, the company funded a FACT installation, designed by architects MacLachlan, Cornelius & Filoni, in a lounge at Pittsburgh's Benedum Center for the Performing Arts (left). The diagram (top) calls out basic hvac elements. The building's system introduces conditioned air at a relatively warm 65 degrees through a plenum under a 14-in.-high access-type floor. Air, at a rate of 10 feet per minute, has enough upflow to eliminate stratification.

The flooring itself, a standard perforated-metal grid (right) covered with a modified-back commercial carpet, acts as the diffuser. While a sheet of paper placed on the carpet will skate across the floor, occupants can't sense any draft. Visibly carrying smoke with it, the room air exhausts through ceiling-return plenums. Half is vented to the outside; the rest is mixed with fresh makeup air, run through an electronic air cleaner and carbon filter, and returned, for a complete change every two minutes. *J. F. B.*

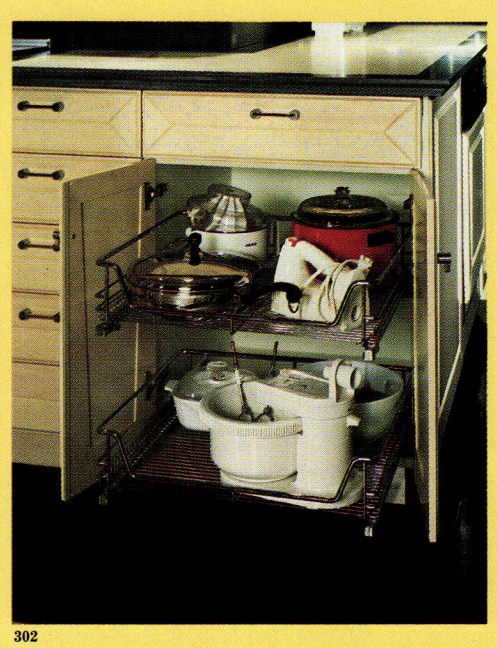
Home Comforts



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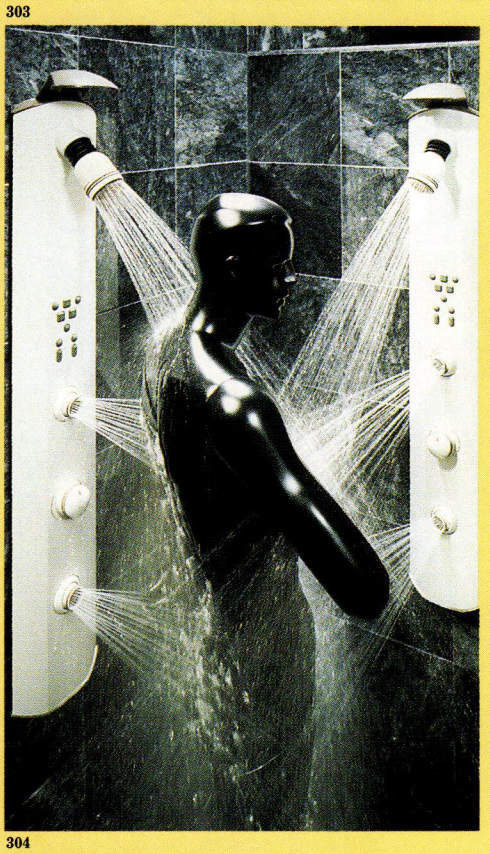
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300. Post-formable. A heat-formable composition is used to make integral sinks such as the Venus undermount basin, shown set in a custom quilt-patterned vanity that is a fabricator's tour de force in three colors of Crystelle solid-surfacing. Available in sheets as well as formed products, the solid-surface material can be curved to tight radii in the field. Avonite, Inc., Los Angeles.

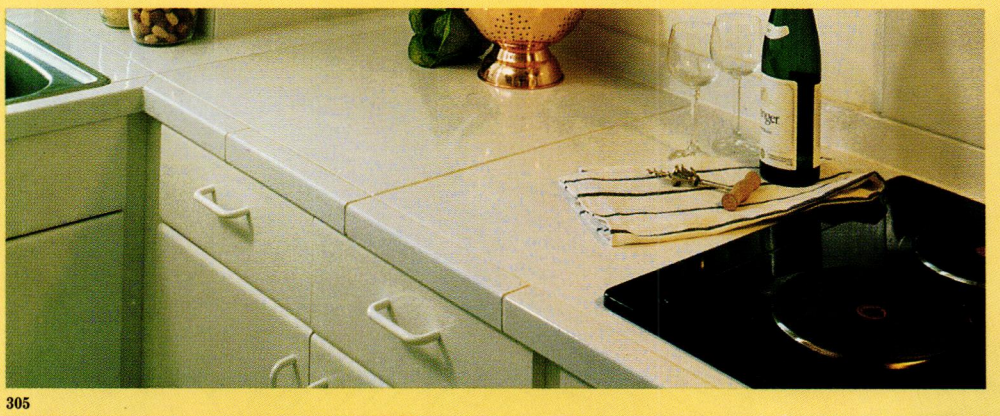
301. At hand. A professional-looking rack hangs over the cooktop or sink to put utensils within reach. The chromed-steel grid lifts up so the wall can be cleaned; accessories include a paper-towel dispenser, saucepan-lid holder, and hooks. Franke, Inc., North Wales, Pa.

302. Deco-motif kitchen. Pull-out wire drawers are storage options with Deco cabinetry, described as more sophisticated than Country and more decorative than Contemporary. Doors may have asymmetrical inserts of glass or mirror; finishes include maple (pictured), cherry, oak, and paints. Rutt Custom Cabinetry, Goodville, Pa.

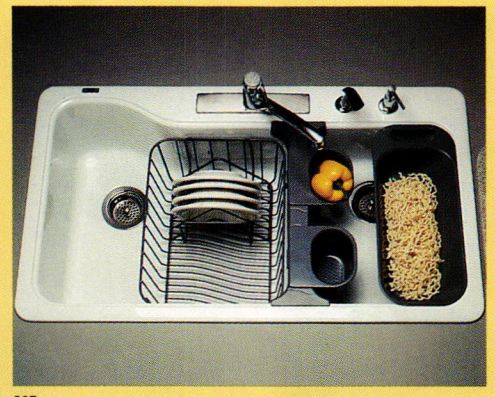
303. Nostalgic. An accurate replica of the ingenious kitchen cabinet manufactured in Indiana around World War I, this new Hoosier is made of matte-finished cherry. The interior has a pull-out work surface, built-in flour bin and swing-out sugar jar, a spice rack, and other space-saving fittings found in the original cabinets. Heritage Custom Kitchens, Inc., New Holland, Pa.

304. Mix-and-match. MasterShower components include a tower with a choice of push-button-operated water-delivery modes:

For more information, circle item number on Reader Service Cards.



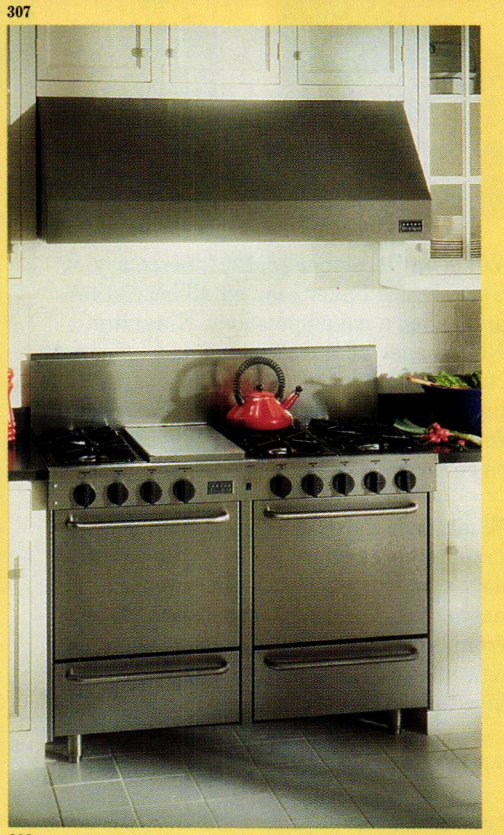
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308

an overhead sheet-flow spout, two adjustable bodysprays, and a three-way (pulsating, regular, or aerated spray) showerhead. Sprays and showerheads meet current gpm restrictions. Kohler Co., Kohler, Wis.

305. Large-format tile countertops. Keraion porcelain is now made in extra-large 2- by 2- and 2- by 3-ft sizes that minimize grout lines on counter surfaces. Tiles, 12-in. backsplash, and matching 12-in. nosings come in either matte or glossy finishes. Buchtal Ceramics, Rosswell, Ga.

306. Compact kitchen-layout system. Even the most basic kitchen configuration can include many of the clever ergonomic accessories that are a hallmark of this German cabinet line. A planning tool, the Compact Design system can be used with both EuroStyle and traditional-design casework, building outward from a butterfly-shaped bank of cabinets. SieMatic Corp., Langhorne, Pa.

307. Light and glossy. Silhouette is the first kitchen line made in Americast, half the weight of cast iron but with the same porcelain-enamel finish. Sinks include accessories such as colanders, utility baskets, and a dish rack. American Standard, Piscataway, N. J.

308. Restaurant-style equipment. Stoves are designed to fit unobtrusively into residential cabinet layouts. Overall depth is 24 in., with a 4-in. toe space that matches standard cabinet setbacks. Burners provide a range of cooking temperatures from 14,000 Btu's down to a low-simmer 400 Btu. FiveStar, Cleveland, Tenn. ■

Hot Stuff

A sauna is not just sweat and a jump in the snow, but a 1,000-year old social tradition.

Hannu Männynoksa



Finnleo Saunas/Saunatec



When on December 18, 1991, Secretary of State James Baker took off all his clothes and joined a naked president Nursultan Nazarbayev of Kazakhstan in a sauna to discuss the fate of the former Soviet Union until three the next morning, he was merely following a long tradition of what has come to be known as sauna diplomacy.

What started out as a functional tool in preplumbing society for cleaning the body developed early into the venue for social ritual and other noncleansing uses, a far cry from the modestly sized units plugged into new suburban condos and health clubs to lure the customers.

An old Finnish saying describes the sauna as

- a sacred place
- a place of silence
- a place of recreation
- a place of peace
- a place of health

And indeed, over 1,000 years of history, the sauna has served for bathing, for manufacturing flax and malt, for smoking meat, washing clothes, making soap, giving birth to babies, and improving general health. Oddly enough sex, despite the sauna's rather obvious attractions in that department, has never been a big factor, at least in Finland, or so it is said.

As for status, what started as a utilitarian device began to emerge, after World War II, as a status symbol that would allow you to keep up with the Seekonens. Special woods went beyond traditional cedar and redwood to Nordic White spruce for walls, and African Abachi for seats. Windows were angled, glass was tinted, unusual wall configurations multiplied along with sporty door options and fancy hardware. Ornate tiled spaces are in for the undressing/dressing and washing functions, especially in corporate suites designed to impress visitors and close deals.

Saunas can even be ordered as kits, complete with the very heart of the facility—the heater—much on the lines of "authentic" English pubs, which may be had from a fabricator in Belgium broken down for easy assembly. Such saunas come as small as 45-inch-square minis and as big as a football locker room. Heaters have genuine stones in direct contact with heating elements, or fake stones sitting atop a standard heater.

The art of löyly

If the heater is the heart of the sauna, *löyly* is its soul. An untranslatable Finnish term that means a combination of vapor, heat, and spirit, löyly is not so much the sauna's surfaces, heat, temperature, humidity, and air movement, but the perceived effect of all of these on your well being. This varies by user, and tends to hinge on your access to the sauna's controls, which range from a thermostat to a ladle and water bucket.

The ritual hasn't changed in centuries. You undress in the changing room, wash or shower, sit on a bench in the hot room for 10 to 15 minutes, slip out into an icy lake (if at hand) for ten seconds, beating yourself with a whisk. You repeat the process twice, and end with a shower and perhaps a beer.

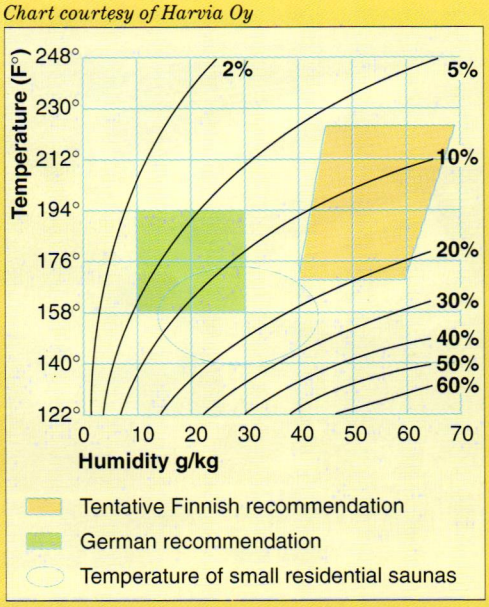
But those are just the mechanics. The real experience is mental. The Finns, who through longest claimed use have acquired a certain arrogance, see the sauna as an indispensable part of life.

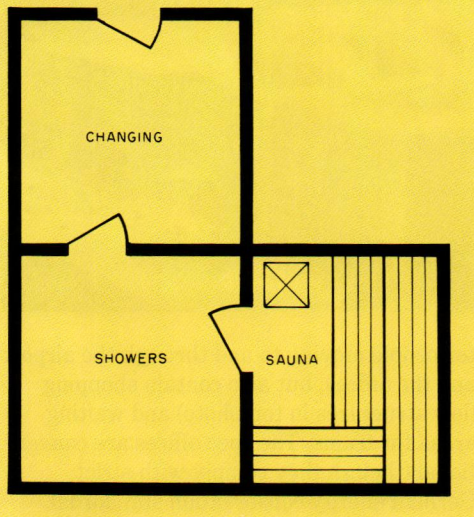
This was never truer than during the Russo-Finnish Winter War of 1939, when the Finnish Army demanded, and got, saunas sent to the front so it could wage a better war. The Russians won, but it was an epic struggle. *S.A.K.*

Reference. "The Finnish Sauna." Ilkka Vuori and Heikki Vapaatalo, ed. *Annals of Clinical Research*, Finnish Medical Society. Vol. 20, no. 4, 1988, pages 215-294.

For more information, circle item number on Reader Service Cards.

Chart courtesy of Harvia Oy





Canon Headquarters in Helsinki sports this circular sauna designed by Arto Kukkasniemi to encourage face-to-face business conversation (photo opposite, far left). Heating unit is in the center. A more traditional configuration is shown opposite, left. Chart (top) shows desirable comfort zones as functions of temperature and humidity. Plan shows typical sauna sequence (above).

Water—steam, or in a sauna, hot tub or spa—can be the most pampering of elements. Here are some sybaritic sources.

Western-wood saunas. The Finlandia sauna is made with Western Red cedar, Alaska Yellow cedar, and other softwoods said to produce the correct dry/damp sauna conditions. Catalog illustrates units from mini-in-a-closet to freestanding outdoor structures; many designs come in kit or modular form. Finlandia Sauna Products, Inc., Portland, Ore. **400**

Self-contained. The multifunction J-Dream, a "whirlpool shower" that the user programs for hydromassage, waterfall-like cascade, steam bath, and even a plain shower, comes in new color combinations of black, teal, almond, silver, and rose, as well as the original all-white. Jacuzzi, Inc., Walnut Creek, Calif. **401**

Steambath. Electronically controlled steam generators for both residential and light-commercial installations offer digital time/temperature readouts that can be located inside the bathing area. Design guide suggests locations for equipment, plumbing, and switches, and describes options such as wireless speakers and aroma therapy dispensers. Steamist Co., Inc., Rutherford, N. J. **402**

Tile spas. A California firm specializes in the design and fabrication of customized large (six or more users) spas and swim spas for homes, health facilities, and resorts nationally. Spas are lined and surrounded by ceramic tile and natural stone, and may be installed in-ground or above-grade. Nespa, Inc., Gardena, Calif. **403**

Sculptured bath. Reinforced-acrylic whirlpools designed by The Queensberry Hunt Partnership, a British firm known for soft, curvilinear forms, have a wave-patterned rim for safe entry. The contoured shape is complemented by rounded handles, integral filler spouts and grab bars, and a cushioned headrest. Tubs, fittings, and accessories come in 13 colors that can be mixed or matched for a custom-color bath. American Standard, Inc., Piscataway, N. J. **404**

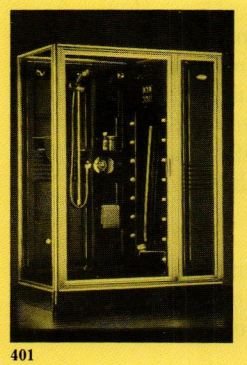
Swedish sauna. Catalog describes Swedish Tylö sauna heaters and precut enclosures made of spruce with obechewood boards, as well as steam cabins and showers. Over 400 prefabricated layouts are available. Tylö AB, Oxford, Pa. **405**

Custom saunas. Architectural guide explains how important the right kind of wood and a foil vapor barrier are to long-term performance of a home or commercial sauna. A design manual has access and layout guidelines, CAD drawings and details, and suggests special plans and windows. McCoy Inc., Livonia, Mich. **406**

Whirlpools. Full-color brochures and technical-product-data sheets detail each model of Aquus acrylic whirlpool baths, which offer simplified leveling supports that eliminate the need for shimming and grouting. Options include metallic trim, underwater lighting, customized jet placement, and grab bars. Lasco Bathware, Anaheim, Calif. **407**

Steam/sauna. Amerec makes steambaths and saunas, each line available as components or in complete, prewired enclosures. Steam catalog suggests mounting locations for generators, and controls for advance-programmable operation. Nasscor, Inc., Bellevue, Wash. **408**

Woodburning sauna. For remote spots, Harvia makes woodburning sauna stoves as well as electric heaters. Brochure illustrates plans that make the best use of the sauna area, with more bench room and less dead space. Harvia Sauna, Portland, Ore. **409**



401

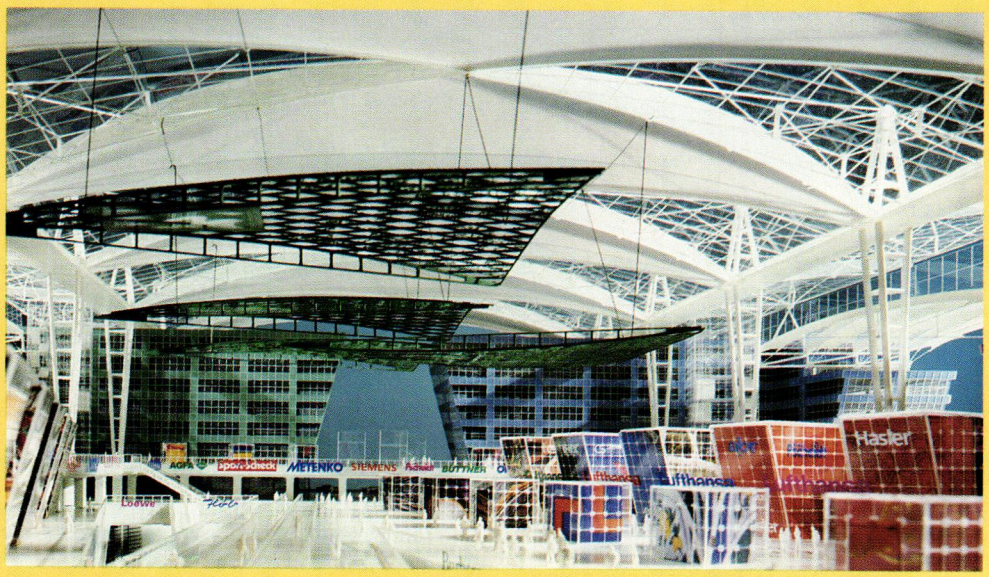


404

A Model of Efficiency

Since the 1960s, when mechanical cooling became nearly universal in America, it has been convenient to think of the building as a box to which you add machinery and inject energy. Robert Venturi, Denise Scott Brown, and Steven Izenour were recognizing the kinds of buildings that resulted when they described "the big, low space" of the Las Vegas Casino as "the archetype for all public interior spaces whose heights are diminished for reasons of budget and air conditioning." In designing what Reyner Banham called "the well-serviced shed," the mechanical engineer has often seemed at odds with the architect. There is never enough space for the equipment and ductwork, the engineer complains, while the architect decries the uncoordinated grilles, smoke detectors, sprinkler heads, and exit signs that litter ceilings and walls.

Increasingly, though, buildings must save more energy, use less water, deliver better thermal comfort, dispose of whatever toxic gases their contents emit, and cool air without the use of CFC-based refrigerants. Improved analytical tools, evolving equipment technology, and changing needs are altering the way the professions work together. Because we're demanding that our buildings' systems perform better than ever, mechanical and electrical engineering may be claiming a new role in the design process. You can see these often conflicting demands as a burden to be overcome or as opportunities—a chance, stealing a phrase from Wright, to break out of the box.





High-tech collaborative process

Developing synergy between architecture and engineering is virtually a religion at the Ove Arup Partnership, a London-based firm that first came to prominence for its work on Jørn Utzon's Sydney Opera House. Arups (as colleagues call them) has built an enormous reputation in Europe as the engineering team behind such tours de force as Richard Rogers's Lloyd's headquarters [RECORD, November 1986, pages 104-117] and Norman Foster's Hongkong Bank headquarters.

In the eyes of many Americans, the expression of structural and mechanical systems in such projects borders on the obsessive, but they demanded architect-engineer collaboration of an intensity rarely encountered in the U. S. Today the firm's engineering virtuosity and collaborative methods are being turned to different purposes. It now uses its powerful analytic tools to provide *less* technology, not more. Or, put differently, the future of mechanical engineering may be that the technology is inherent in the design process. The resulting structure will increasingly use passive solutions.

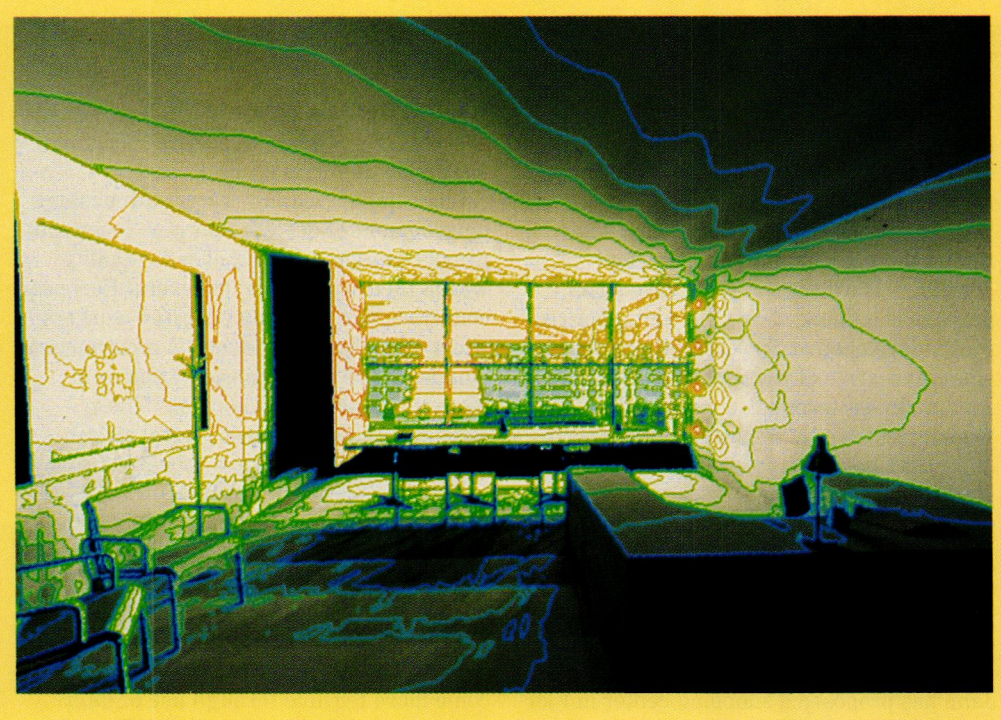
Monumental concourse for an airport

The Munich Airport Center (above and opposite), designed by Murphy/Jahn Architects, is an example of architecture engineered to avoid installing equipment. The project is a U-shaped office-building complex that surrounds a plaza and surmounts a commuter-rail concourse. The plaza will connect rail lines, parking, and an existing airport with a yet-to-be-approved new terminal. It will shelter people moving to and through the airport and the offices, but also contain shopping (low structures in top photo) and waiting areas for trains. The spec offices are conventional (though they comply with strict German energy-conservation standards). The concourse, however, might have been treated—like the public areas of most American shopping malls—as a big, artificially heated, cooled, and lighted volume.

But Murphy/Jahn carefully considered the users. Most will be dressed for the weather (which, in Munich, corresponds most closely to mild London or Seattle), and occupancy periods will be short. These conditions suggested that the concourse might be covered to keep out rain, snow, and wind, but open to the air. Budget considerations also entered the picture. If enclosing the space proved too expensive, office rents would have to be set too high. "It's a focal point," explains Steve

The Munich Airport Center shows that mechanical engineers' powerful new analytic tools encourage passive solutions.





To avoid mechanically heating or cooling the concourse of the Munich Airport Center (opposite top), the engineers analyzed daylight and ambient wind and temperatures, including the contribution of surrounding buildings (opposite bottom). The fabric and glass concourse roof (left) is supported by "banana" beams. Planters suspended under the ceiling (black triangular platforms) offer additional screening of the concourse in summer. Using ray-tracing techniques (which calculate light source and direction), computerized daylight analysis renders light levels as colored contour lines (above).

Cook, of Murphy/Jahn. "By enclosing but not climatizing the plaza, it was more competitive."

Passive heating and lighting

Murphy/Jahn (with Arups as structural engineers) designed a roof structure for the concourse that alternates glazed and fabric-covered areas. The engineers performed computerized lighting studies to determine a ratio of glass and fabric that would optimize daylighting, winter heat gain, and summer shading. "We looked at combinations of glass and fabric and ceramic-frit variations," explains Greg Hodgkinson of Ove Arup's New York office. As software has improved, the computer's output, once mathematical point readings, is now converted into graphic presentations that are more quickly understood by designers and clients alike (photo, top right, and illumination studies, following pages).

In winter, the roof was expected to contribute to heat gain, but, says Hodgkinson, "We also used throw-away heating from the office buildings and shopping kiosks." The firm performed an analysis based on computational fluid dynamics (CFD) to determine the distribution of temperatures and account for buoyancy effects (an example is shown following pages). Because the computer model constantly recalculates conditions within some 50,000 "cells" of the spatial envelope, it requires extraordinary power, taking up to 12 hours to run on a minicomputer.

The model did show that the project as now designed will be considerably warmer when heat is most needed. With an external temperature of -4C (about 25F), the space will be about 4C (40F). This is quite an accomplishment for a room made up mostly of open walls. Summer shading should keep concourse temperatures at no higher than those prevailing outside.

CFD models proved useful in examining other environmental aspects of the space. Since the room is not enclosed, the designers wanted to minimize the effects of wind. Gaps between the buildings are large, and a CFD model measured wind effects at different heights and with various shielding devices in place. Fire is a concern in even a semi-enclosed space. To avoid the costs of sprinklers or other extinguishing devices, the firm modeled several predictable fire scenarios including one originating on a train. (following pages). Arups was able to show fire authorities how hot a realistic fire would be within the space and the likely trajectory of the smoke plume. The analysis showed that there was ample time for concourse patrons to escape even in a very hot and fast-developing fire. [For more on

smoke-control modeling, see RECORD, February 1992, pages 38-39.]

The analyses served a further purpose: to gain approvals from the client and governing authorities. Without such sophisticated tools, says Steve Cook, "We don't have a way to take issues such as the heat contribution of the surrounding buildings into account." The design of other Ove Arup projects is influenced by CFD and other recently developed analytical methods. The sine-wave curve of the roof of the Kansai, Japan, airport terminal, a competition-winning scheme by Renzo Piano [RECORD, June 1989, page 67], follows the trajectory of air flowing from huge nozzles aligned on one wall. The layer of air reduces summer heat gain through the glass roof and insulates against winter losses. The huge concourse requires only minimal additional cooling and heating at the much-lower stratum actually occupied by patrons. Murphy/Jahn has proposed a shopping center in Florida using a similar philosophy.

Codes now encourage new approaches

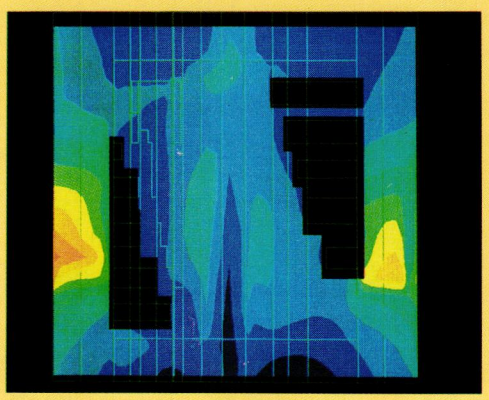
Today, new thinking in mechanical and electrical design is even being encouraged by codes. Since ASHRAE (with IES) promulgated its dual-path compliance procedure *(Energy-Efficient Design of Buildings Except Low-Rise Residential Buildings*, Standard 90.1-1989—RECORD, June 1988, pages 152-157 and August 1988, pages 114-115), design teams have been able to take advantage of a "performance" path, which rewards innovative designs. Developments in the field are now so frequent that a more flexible approach to mechanical design is an important survival tactic. Productivity concerns and dissatisfaction with indoor-air quality prodded many engineers to raise ventilation rates and introduce more fresh air even before ASHRAE made such changes in its Standard 62, *Ventilation for Acceptable Indoor Air Quality*. With new evidence of rapid ozone depletion, the U. S. may soon join most of the developed world in accelerating the phase-out of chlorofluorocarbons (CFCs), which are used in many kinds of chilling equipment [RECORD, October 1989, pages 134-135]. Increasing fresh air and replacing cooling equipment could raise energy use, however, demanding building designs of greater sophistication to meet conservation goals.

More individual control?

The challenges don't stop there. Because enormous productivity gains beckon reseachers and manufacturers are pushing development of devices that give occupants greater personal control over air quality within their workspace. In several European countries, where highly educated workers wield considerable influence in government, standards are under consideration or in place to mandate such control. "There's strong sentiment against central air conditioning in Europe," says Edward Arens, an architecture professor at the University of California, Berkeley, who has looked into European systems. Similarly, air-quality advocates propose more operable windows for office buildings. This concept, anathema to most mechanical engineers (the dirt, the noise, the effect on air distribution), may become more feasible through use of interactive control devices that shut off nearby mixing boxes to avoid wasting cooled air.

The ever-cheaper computer power that makes complex analyses more accessible is also being applied by manufacturers, especially of control technology. Such devices "are getting easier to operate and less centralized," say Stephen Fey, director of marketing for Andover Controls. "You can put in all sorts of little microprocessors even at the room level." Occupancy sensors, which are becoming more popular as lighting controls, can be connected to ventilation systems as well. Potential energy savings are significant, says Arens, since "most offices are occupied less than half the time."

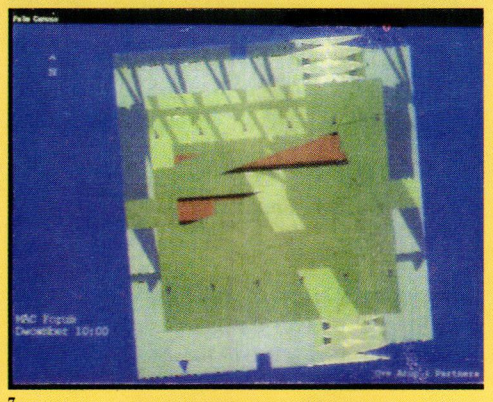
Now more than ever the design team can question commonplace assumptions about the way we think of conditioned space. Do we need to heat and cool transition areas such as corridors and lobbies in the same way as offices where people work seated for long periods? In the past, hurdles in examining such situations tilted us to plain, all-purpose solutions. Today, the demands of energy conservation, occupant needs, and environmental quality suggest that pumping energy into a box is a habit we should leave behind. *James S. Russell*



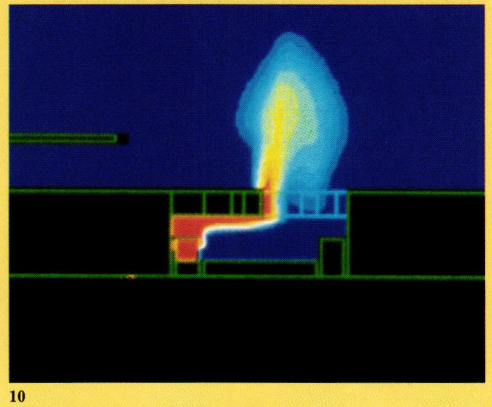
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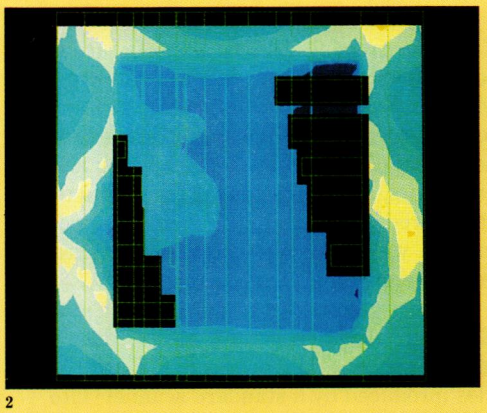
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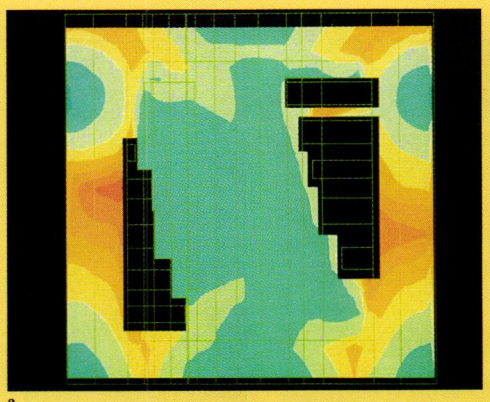
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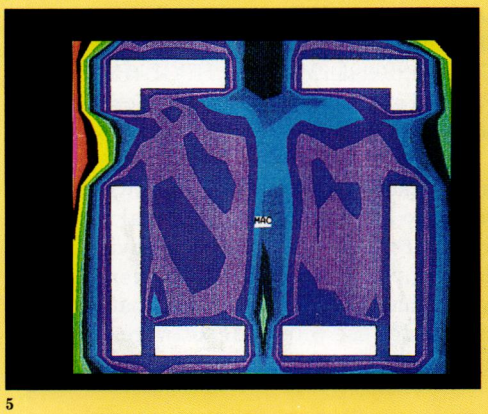
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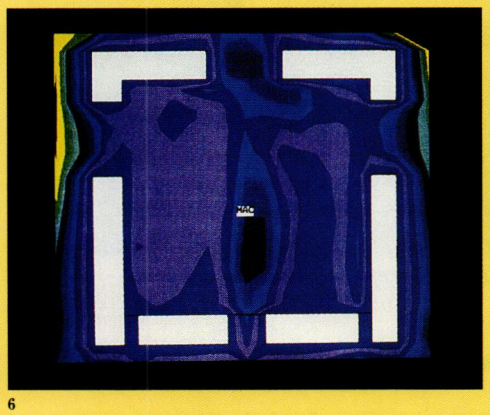
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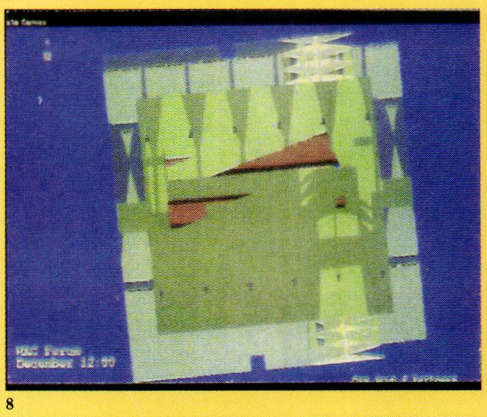
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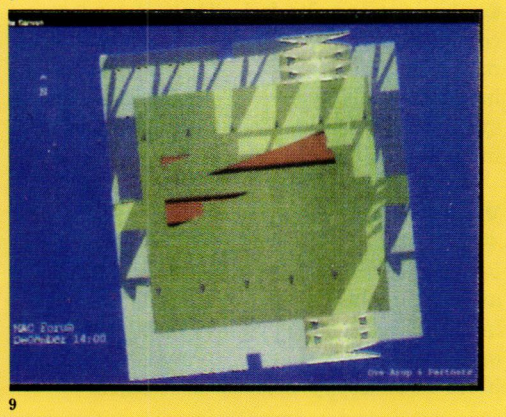
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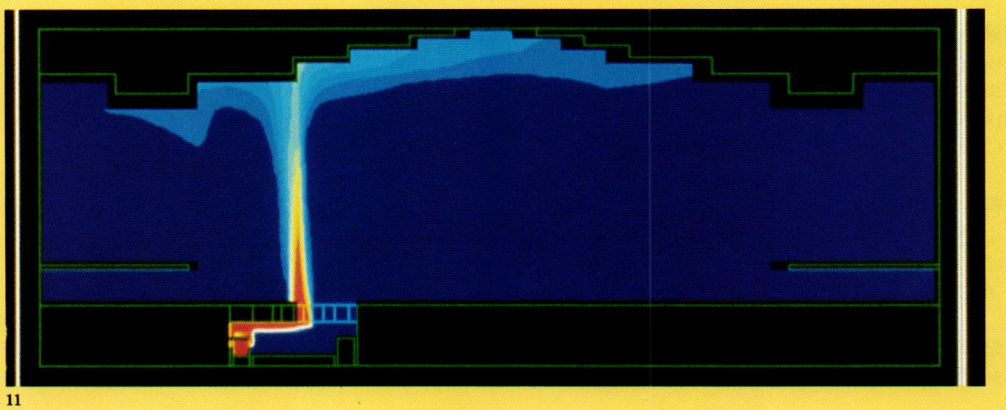
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Temperature Analysis

The Ove Arup Partnership used a computer program, called ROOM, to assess the mean radiant temperature of the Munich Airport Center's concourse, taking into account roof shading and heat radiated by adjacent buildings, shopping kiosks, and trains arriving at the lower level. Principles of Computational Fluid Dynamics (CFD) were used to analyze temperature distribution and the effects of natural buoyancy. Colors in the CFD plan diagrams (left) represent temperature contours during average summer *(1)*, extreme summer *(2)*, and average winter *(3)*.

Wind analysis

The engineers used CFD to predict whether ambient winds would be uncomfortable for users of the concourse. (Wind effects on building structure were analyzed differently.) As a result of modeling, the design was altered to include shielding devices in areas open to prevailing winds. The plan diagrams use color to indicate velocity contours at 2 meters *(4)*, 7 meters *(5)*, and 14 meters high *(6)*. The analysis showed that winds hitting the structure at 3m/s (about seven mph), are reduced to a range of 0.75m/s (1.6 mph) to near zero.

Shading study

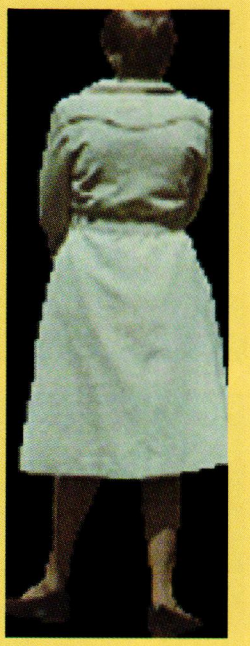
The architectural design anticipated using the roof for lighting throughout the day (uplights would be turned on at dusk). Arups analyzed amount of light, locations of shadows, and the contrast between lighted and shadowed areas. The design team studied roof designs with various proportions of fabric versus glass. The final proposal recommended ceramic-frit glass to reduce the contrast ratio between bright and shaded areas. Shadow studies show the winter solstice condition in plan at 10:00 A. M. *(7)*, 12:00 noon *(8)*, and 2:00 P. M. *(9)*.

Fire study

Smoke can do considerable harm even if a fire is limited. CFD models were designed to examine smoke flows for a variety of fire scenarios. Shown in section at left is a fire breaking out within a train below the concourse. Figure 10 shows the temperature contours 30 seconds after the simulation begins; figure 11, after 80 seconds. The models demonstrated that there was enough time to evacuate the concourse and that structural elements would remain viable for a reasonable amount of time.

ImageCELs





The library of over 1,100 images that ImageCELs features includes surface treatments such as brick and photos of people.

Imagine a library of more than 1,100 images that can be added to your 2-D and 3-D CAD drawings. That's ImageCELs. The CD-ROM package includes surface treatments such as various versions of brickwork, wood, and marble. It includes photos of people, vehicles, and furniture as well.

The effects are particularly striking when you add these images to 3-D models of buildings or building interiors. If you are careful and you have the right software, you can even add surface textures in perspective, rather than simply in the plane of the computer monitor.

The images are stored on a CD-ROM disk in numerous formats, including TGA, Apple PICT2, Amiga IFF, GIF, PCX, I16 (the Intel DVI standard for multimedia animations), CEL, and DIB. The CD-ROM disk itself is compatible with any CD-ROM reader that can handle the ISO 9660 format (almost all do). You can also move image files from the CD-ROM disk to a floppy drive, and from there to another computer. For instance, we copied images from a CD-ROM connected to an MS-DOS computer, onto a 3.5-inch disk that can be read by new Macintoshes.
Circle number **309**

ImageCEL summary

Equipment required: A CD-ROM reader compatible with the standard ISO 9660 format, and software that can read one of the image formats stored on the disk. On DOS systems, a VGA monitor is required to view images in full color.

Vendor: Imagetects, 7200 Bollinger Rd., #802, San Jose, CA 95129. Phone 408/252-5487. $495 for the full CD-ROM disk. Also available is the 900-image Designer Package in TGA format on floppy disks for $395 ($425 on 3.5-in. disks), and two 160-image texture libraries on floppy disks for $149 each.

Manual: The detailed information you'll need is stored in text files on the CD-ROM itself. You'll have to experiment with eyepoints, shading, and perspective inside the CAD software you use to create models.

Ease-of-use: Some of the image files are huge, like the 24-bit file (16.7 million possible colors). Especially good: PICT images on Mac software.

Error-trapping: This really depends on the software you are using to view the images.

Envision It Version 2.0

There's a growing demand for software that can turn existing paper drawings into vector files usable in drafting programs. In a vector file, each entity—a line or an arc—is defined mathematically by its starting and end points, and by its shape. These files are structured quite differently from scanned images, which are made up only of separate dots arranged in patterns.

Envision It is a particularly flexible example of such software. It converts PCX or TIFF files (produced by a standard scanner) into DXF (the AutoCAD standard), IGES, DesignCAD 2-D and 3-D, Generic CADD, Cadman, RenderMan, and HPGL (Hewlett-Packard graphics language) files for CAD software.

In use, the scanned image is usually converted to Envision It's own internal vector file. There, it can be edited with Envision It's drawing program, and finally converted with a third program into file formats such as DXF for use with CAD software.
Circle number **310**

Envision It summary

Equipment required: MS-DOS (IBM-compatible) computer, 640K of random-access memory, fixed disk.

Vendor: Envisions Solutions Technology, Inc., 822 Mahler Rd., Burlingame, CA 94010. Phone 415/692-9061. $399.

Manual: Paperback, spiral-bound. The conversion part of the program is simple; most of the manual's space is taken up with details of the editing program.

Ease-of-use: The key is to match the style of the drawing being converted to the parameters set. For instance, if you tell the software to recognize curves as single entities, and the drawing has a lot of curves, it will convert faster and the file will be smaller than if each curve were converted into small line segments.

Error-trapping: The biggest problem is running out of RAM; the software can only guess how big the drawing will be when it's converted from dots to vectors.

MacDraft for Windows 1.0

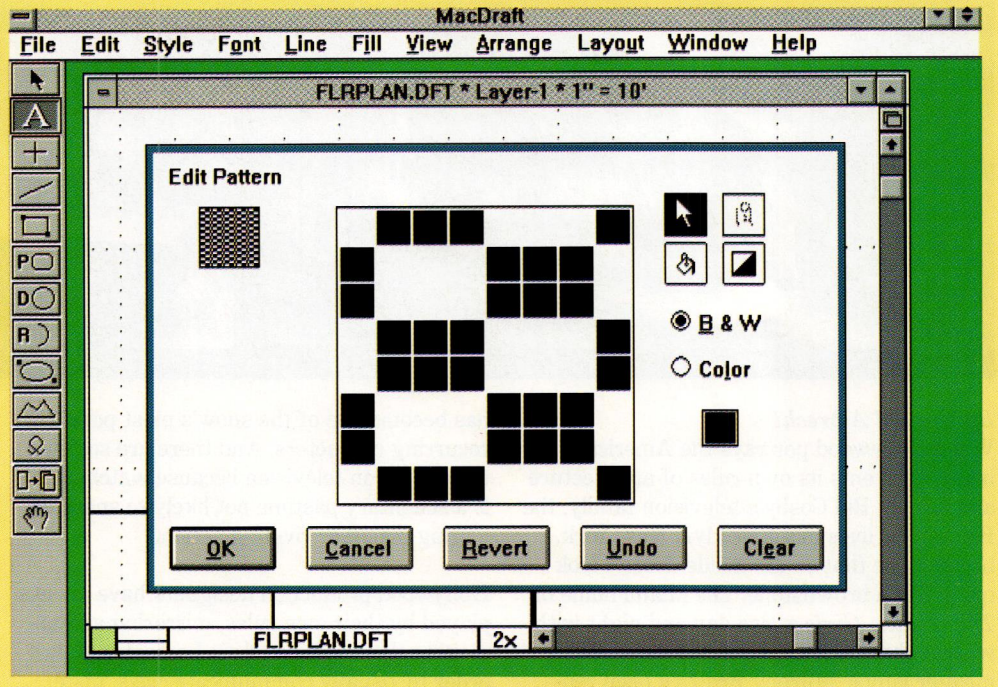
For more information, circle item numbers on Reader Service Cards.

This is a flexible 2-D drafting program with good drawing tools, flexible layer controls, and the ability to handle symbol libraries. The Windows version keeps the most desirable features of the Macintosh. The computer screen's correspondence to a drawing table is quite close. Installation is simple. The manual is more like Macintosh than DOS—and thus easy to use. Up to four documents can be open at once, and material can be moved from one file to another. TIFF images as well as MacDraft files can be moved in this way, allowing easy incorporation of surface textures such as those in the ImageCELs collections.

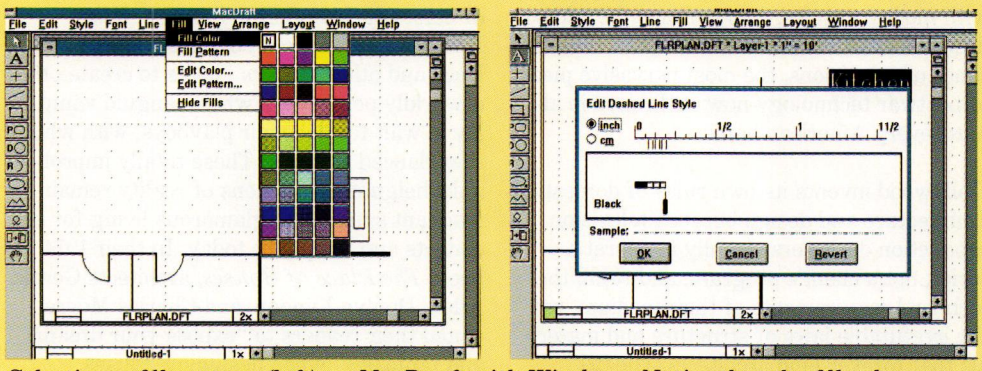
But why use this version when the Macintosh works so well? Equipment cost, for one thing. A DOS computer that runs this software well costs only about $1,500 these days. The equivalent Macintosh is still $500 or so more. File interchangeability is another. Any Macintosh made since the fall of 1990 can read and write DOS disks. You can move files between the two normally incompatible systems on DOS disks.

Why not use the Windows version? For one thing, it is a bit new and buggy. Depending on what we had loaded into the system along with Windows, we could cause the computer's speaker to beep continuously, and we could keep files from being saved. We suspect the problems are with Windows more than with MacDraft.

For another, the keyboard shortcut commands are Windows-standard, not Macintosh-standard, so the two programs do not quite work the same way.
Circle number **311**



Editing a fill pattern and its color for MacDraft with Windows 1.0.



Selecting a fill pattern (left) on MacDraft with Windows. Notice that the fill color and pattern, and line type, appear at the lower left corner of any drawing window. When editing a line pattern (right), the pattern of dashes and dots will appear in a line as it is drawn.

MacDraft summary

Equipment required: A computer capable of running Windows 3.0 or above, with at least 2MB of RAM (4MB or more strongly recommended). Although a computer using the old 80286 CPU chip will work, the newer 80386 or 80486 computer families are far superior. The program fits on a single high-density disk; a 5.25-in. 1.2MB disk and a 3.5-in. 1.44MB are in the same package.

Vendor: Innovative Data Design, Inc., 2280A Bates Avenue, Concord, CA 94520. Phone 510/680-6818. $495. When you register the program, you get a free program that converts between the IBM and Macintosh MacDraft file formats.

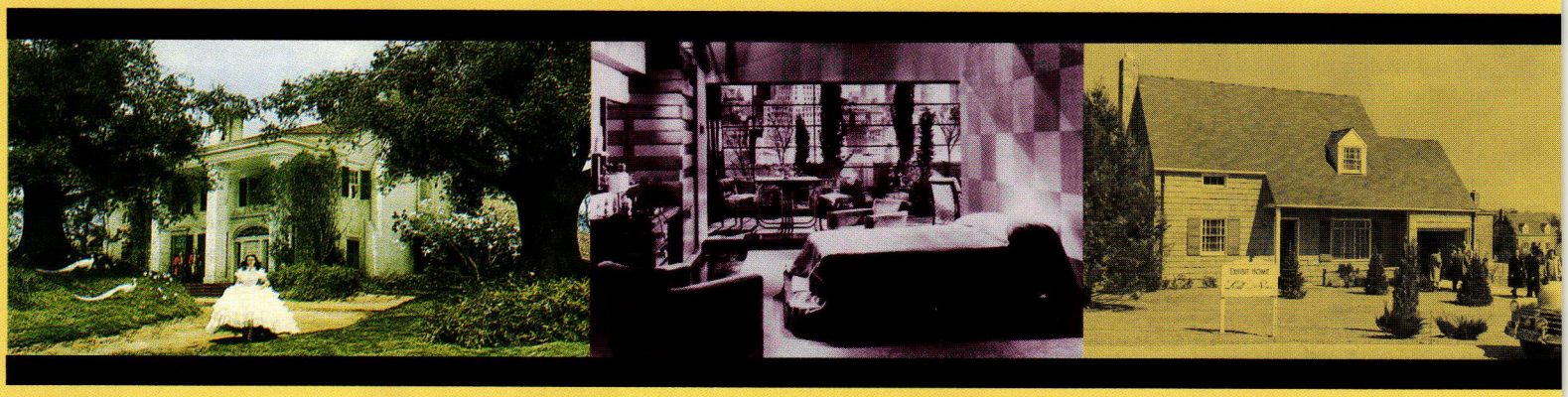
Manuals: Spiral bound with reference and tutorial. The on-line help meets Windows standards, and refers back to pages in the manual.

Ease-of-use. Good. The biggest shortcoming is lack of one-step parallel line drawing. As with Macintosh software, you save defaults for specific file types as "stationery" files. This allows many combinations of file size, scale, and printers to be saved separately. It's easy to create new patterns for fills and lines. You can crop an imported bitmapped image (a textured surface, for example), but the image takes the same space in memory. If a texture is in a grouped image (combined with other elements), use the ungroup command before cropping.

Error-trapping. Good.

Home Screen Home

Does the house on the silver screen or on television look anything like the one you live in?



By Donald Albrecht

When Hollywood portrays the American home, it invents its own rules of architecture and design. Bill Cosby's television family, the Huxtables, lives in a Brooklyn, New York, brownstone that on the inside doesn't look much like a brownstone. The Miami home on *The Golden Girls* glows day and night with white light, though the set has only a few meager lamps. Murphy Brown's been renovating her house in Georgetown for years with modest results. And perhaps the oddest design feature on television is the virtual absence of televisions, the most pervasive piece of postwar technology now enthroned in almost every American home.

Hollywood invents its own rules of domestic architecture and design because television production designers visually interpret a script, not a client's program, and fulfill the technical requirements of their medium, not the irrefutable laws of structure and materials that forever bind architects. The 22-minute airtime of situation-comedies means that actors must enter sets quickly, without much intervening space. Thus the front door of the Huxtables' house opens into the living room and not through the typical brownstone's stairhall. The persistent, inexplicable light of *The Golden Girls* is largely due to the fact that sit-coms are filmed with several cameras running simultaneously and located throughout the set, necessitating even, overall lighting. Murphy Brown's house is still unfinished because Eldon, her house painter, has become one of the show's most popular recurring characters. And there are so few televisions on television because watching TV is a sedentary pastime not likely to spark engaging dialog or riveting action.

Hollywood production designers have always played by their own rules, mirroring and exploiting the latest trends in home design in order to visually communicate class, taste, education, and occupation. Depression-era art directors such as Cedric Gibbons, Hans Dreier, and Van Nest Polglase adapted Art Deco and other modern idioms to create otherworldly penthouses where languid vamps lay in wait for debonair playboys, with whom they danced all night. These totally improbable, heightened versions of reality remain resonant symbols of glamorous living for architects and the public today. In their 1974 book, *The Place of Houses,* architects Gerald Allen, Donlyn Lyndon, and Charles Moore urged their readers to "expose your dreams and fantasies" when designing houses. "What places have lurked in the recesses of your mind since first you saw them or read about them?" they asked. "Are they penthouses spacious enough for Fred Astaire and Ginger Rogers to grace with an impromptu foxtrot or staircases grand enough for Scarlett O'Hara to descend?"

While an Astaire-and-Rogers penthouse heralded a gleaming streamlined future, Scarlett's Tara in *Gone With the Wind* was a powerful expression of traditional values, of the home to hold on to at all costs. As it evolved from set sketches to its appearance in the finished film, Tara departed from historical reality to embody a romantic notion of the Old South, and ultimately acquired a polish and elegance that would have made it fit comfortably into any affluent neighborhood of the 1930s. Accompanied by an extravagant promotional campaign that produced Tara-inspired cookbooks, store displays, bedspreads, candy boxes, and magazines, *Gone With the Wind* fueled a colonial revival across the U. S., and promises to do so again when Alexandra Ripley's sequel is adapted to TV.

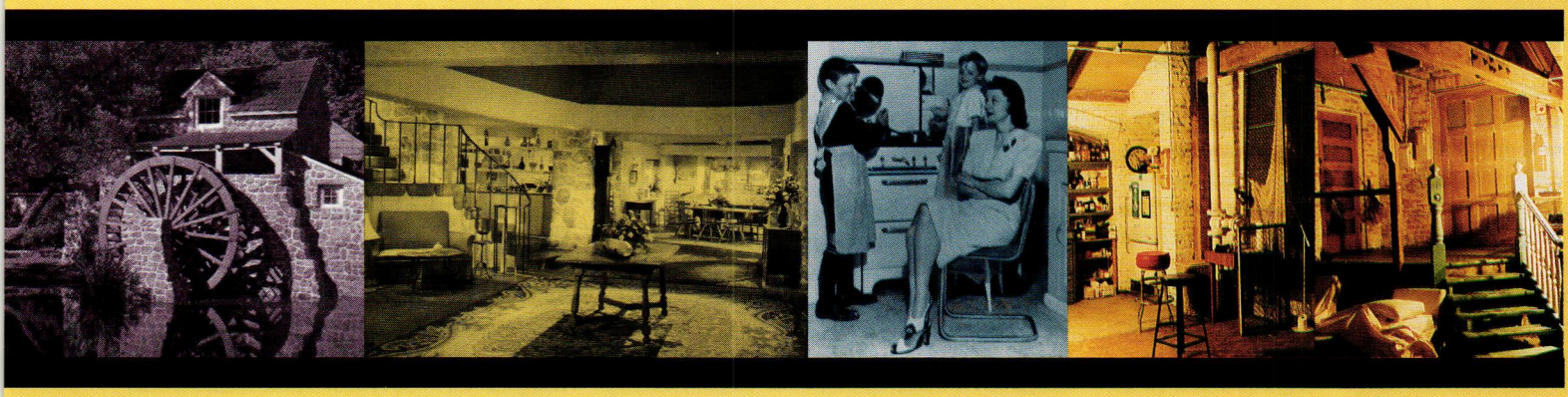
Suburbia on the big screen

Movie design also played a role in America's love affair with suburbia. Katharine Hepburn's converted Connecticut farmhouse in *Bringing up Baby* etched an idealized image of high-class suburbia in the public imagination. Perry Ferguson's set was a sprawling wood-and-stone villa in a patch of pristine, bucolic countryside, complete with a nonfunctional watermill that served as a kind of preindustrial garden folly. The public's nostalgia for a quickly fading preurbanized America spurred their love of Mickey Rooney's Andy Hardy and his family, whose series of filmic exploits took place in the mythic small town of Carvel built by MGM on a backlot in Culver City.

The Hardys' solid middle-class values and their clapboard house and picket fence dominated the nation's screens after World War II. *Mr. Blandings Builds His Dream House,* a film about leaving New York City for the suburbs, coincided with one of the great economic booms in American history. The market for new homes was so large that the housing industry could scarcely keep up with it. In 1947, developer William Levitt began construction of Levittown, and by 1951, he had built over 4,000 units in a range of "Cape Cod Colonial" and "Ranch" styles.

Donald Albrecht is an architect and Curator of Production Design/Exhibitions at the American Museum of the Moving Image in New York City.

From left to right: Tara from Gone With the Wind, *(1939 Lyle Wheeler, art director); Manhattan penthouse from* The Easiest Way, *(1931, Cedric Gibbons, art director); Levittown model home (1947); exterior and interior views from* Bringing Up Baby *(1938, Van Nest Polglase, art director); promotional photograph from television program* The Ozzie and Harriet Show *(1947); two interior views of loft on television program* thirtysomething *(1991, Brandy Alexander, production designer)*



Brandy Alexander

These houses offered images of domesticity that were readily accepted by the public, owing some of their warm and cozy meanings to films such as *Blandings* and TV shows like *The Adventures of Ozzie and Harriet*. In 1956, even Ricky and Lucy Ricardo abandoned Manhattan for the suburban idylls of Westport, Connecticut.

The domestic decor of television still follows architectural formulas that video Vitruviuses mapped out in the 1950s. Front doors usually open onto entryways raised a few steps above the living room, offering the audience at home an instant, uninterrupted view of visitors on screen. The house's active rooms—bedroom, living room, and kitchen—stretch across an axis parallel to the screen which, like a theatrical set or child's dollhouse, explains to the audience the spatial arrangement of the house in quick, simple terms. Television living rooms have free-floating furniture groups, each offering a different opportunity for action or dialog. Stairs at the living room's rear provide places for dramatic entrances. Pass-through windows and swinging doors connect the living room and kitchen, enhancing a sense of open, informal planning. These architectural features ease interaction among rooms, and their recurrent appearance on television helped popularize them with architects and clients who saw them nightly. Ultramodern kitchens are *de rigeur* on TV for middle-class or wealthier characters. These kitchens have cooking "islands" for the same reason that living rooms have furniture groups.

The happy sit-com home

Sit-com houses are always brightly lit, suggesting an eternally sunny world untouched by friction, unshadowed by ambiguity. The families within are idealized versions of many of our own, and the genre's multicamera set-up represents television's domestic architecture in a conventional, dead-on way, without fancy or stylized camerawork.

Not all media representations of suburbia were so cheery, particularly on film. Director George Romero explored the dark side of mall culture in *Dawn of the Dead*, and the TV set in *Poltergeist*, far from a transmitter of images of comforting domesticity, unleashed a monster of fiery destruction. The comedy *Desperately Seeking Susan* presented a less apocalyptic vision when Rosanna Arquette's housewife flees the boredom of suburban New Jersey for a lively Manhattan loft, *the* domestic environment used to signify nonconformity since Jill Clayburgh portrayed an Upper East Side Manhattanite who moved to SoHo with an artist played by Alan Bates in *An Unmarried Woman*.

Loft living blossomed in the 1980s, most notably as the photography studio-cum-residence of Melanie Mayron on *thirtysomething*, television's most sustained treatise on residential design. "The characters' homes speak of busy lives and multiple desires," Roberta Smith observed in *The New York Times*, "with the mélange of children's toys, books, and artworks in particular communicating the ongoing conflict between creativity and real life." Greene and Greene, Chippendale, Eames, 1950s Retro, Stickley, and Frank Gehry defined the style-consciousness of *thirtysomething*'s cast of ad executives, writers, and professors, who seemed to need the certainty of designer labels to navigate the waters of moral ambiguity and self-doubt.

In these economically tough times, television audiences seem less attuned to the designer-mania of *thirtysomething* than to the working-class ethos of *Roseanne* or the fixer-upper plots of this year's hit, *Home Improvement*. The high-style duplex of the 1990 movie *The Bonfire of the Vanities* never stirred the public's interest for this now-legendary flop, and even the aristocrats of ghoul, the Addams family, struggled to save their own neo-Gothic version of Tara.

Architects raised on TV

Yet media images of home and media-inspired ways of making architecture still circulate among architects, decorators, and clients raised on movies and television. Pulte Homes recently commissioned *Who Framed Roger Rabbit?* designer William McAllister to create a new town near Los Angeles because who better than a set designer knows how to evoke a world inhabited by Cleavers? Robert Stern and Michael Graves pursue architectural effects more scenographic than functional, whether they work for Disney or a private client. Ironically, perhaps the most successful co-opter of movie imagery is clothing designer Ralph Lauren. His home-furnishing collections attempt to fulfill Hollywood's promise of life as a series of star performances, from Katharine Hepburn in *The Philadelphia Story* to Meryl Streep in *Out of Africa*. By adding architecture to his empire of products, Lauren has proven that real-life stage sets, like fashion, are vehicles of fantasy, which draw on Hollywood's rich landscape of home-sweet-home dreams and domestic desires. ■

Briefly Noted

Yesterday's Houses of Tomorrow: Innovative American Homes, 1850 to 1950, *by H. Ward Jandl. Washington: The Preservation Press, 1992, 216 pages, $30.*
Looking back at the future, this fascinating book profiles a dozen houses that were consciously designed and widely publicized as prototypes of tomorrow. Each promised to break important new ground—revolutionizing the way Americans would build, maintain, or live in their houses. From Catharine Beecher's American Woman's Home and Thomas Edison's poured-concrete houses to Frank Lloyd Wright's Usonian designs and Carl Strandlund's all-metal Lustron House, Jandl and his contributing authors, John A. Burns and Michael J. Auer, examine the changing promises of innovative domestic architecture. The book's straightforward and informative text, though, deserves better photographs than the often-grainy black-and-white ones used. Some new photographs of what the extant houses look like today would also have been helpful.

The American Houses of Robert A. M. Stern, *introduction by Clive Aslet. New York: Rizzoli, 1991, 256 pages, $75.*
A big book with four-color photos of big houses for people with big bucks. Like the houses shown between its covers, the book serves up a heady stew of neo-patrician ambitions, scholarship, attention to detail, and the occasional touch of whimsy. A thoughtful preface by Stern and a solid essay by Clive Aslet introduce this showcase of luxurious houses.

Arquitectonica, *by Beth Dunlop. Washington: AIA Press, 1991, 215 pages, $40 (paper).*
The first monograph on the firm whose rise to hip status paralleled the revival of its home town, Miami, this book presents some 40 projects from 1976 to 1990. A sliver of a foreword by Philip Johnson and a sharp essay by Dunlop precede a portfolio of works. Massimo Vignelli's book design cleverly underscores the high-impact nature of the firm's work, but some grainy photos detract from the overall quality.

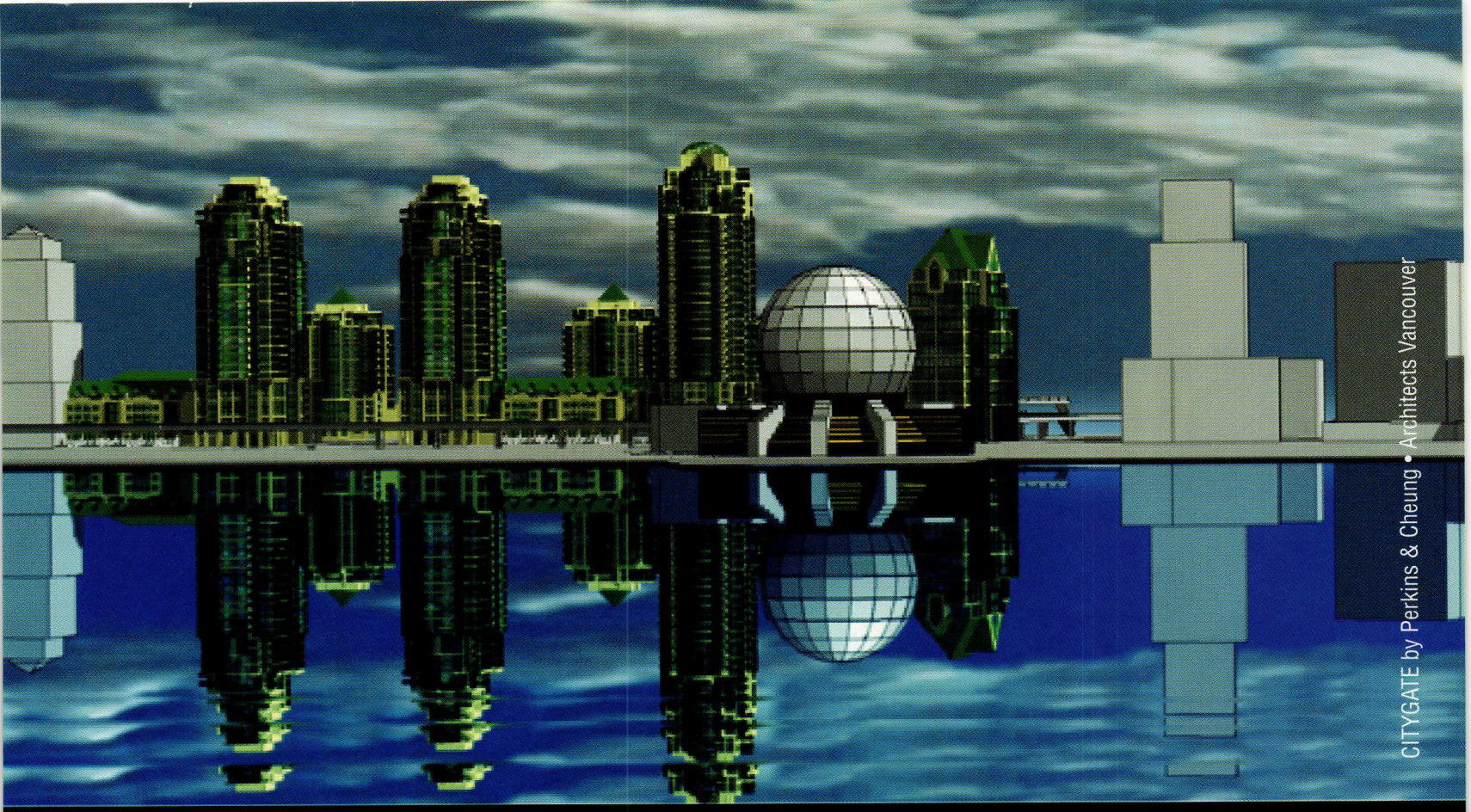
Raj Rewal, *by Brian Brace Taylor. London: Mimar Publications, 1992, 161 pages, $69.*
Recipient of the Indian Institute of Architects' 1989 Gold Medal, Raj Rewal is a leading member of a generation of Indian architects devoted to blending Modernism with local building traditions. This book offers a handsome portfolio of Rewal's work, from his French Embassy Staff Quarters in the 1960s to his Asian Games Village and State Trading Corporation skyscraper in the '80s.

Mughal Architecture: An Outline of its History and Development (1526-1858), *by Ebba Koch. Munich: Prestel, 1991, 160 pages, $25 (paper).*
Combining aspects of Central Asian, Indian, Persian, and European cultures, Mughal architecture left a rich legacy of impressive buildings—including the Taj Mahal and palaces throughout south Asia. Measured drawings, well-chosen photographs, and an insightful text make this book useful to architects as well as historians. ■

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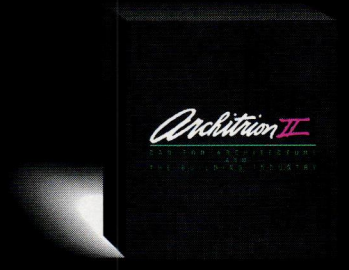


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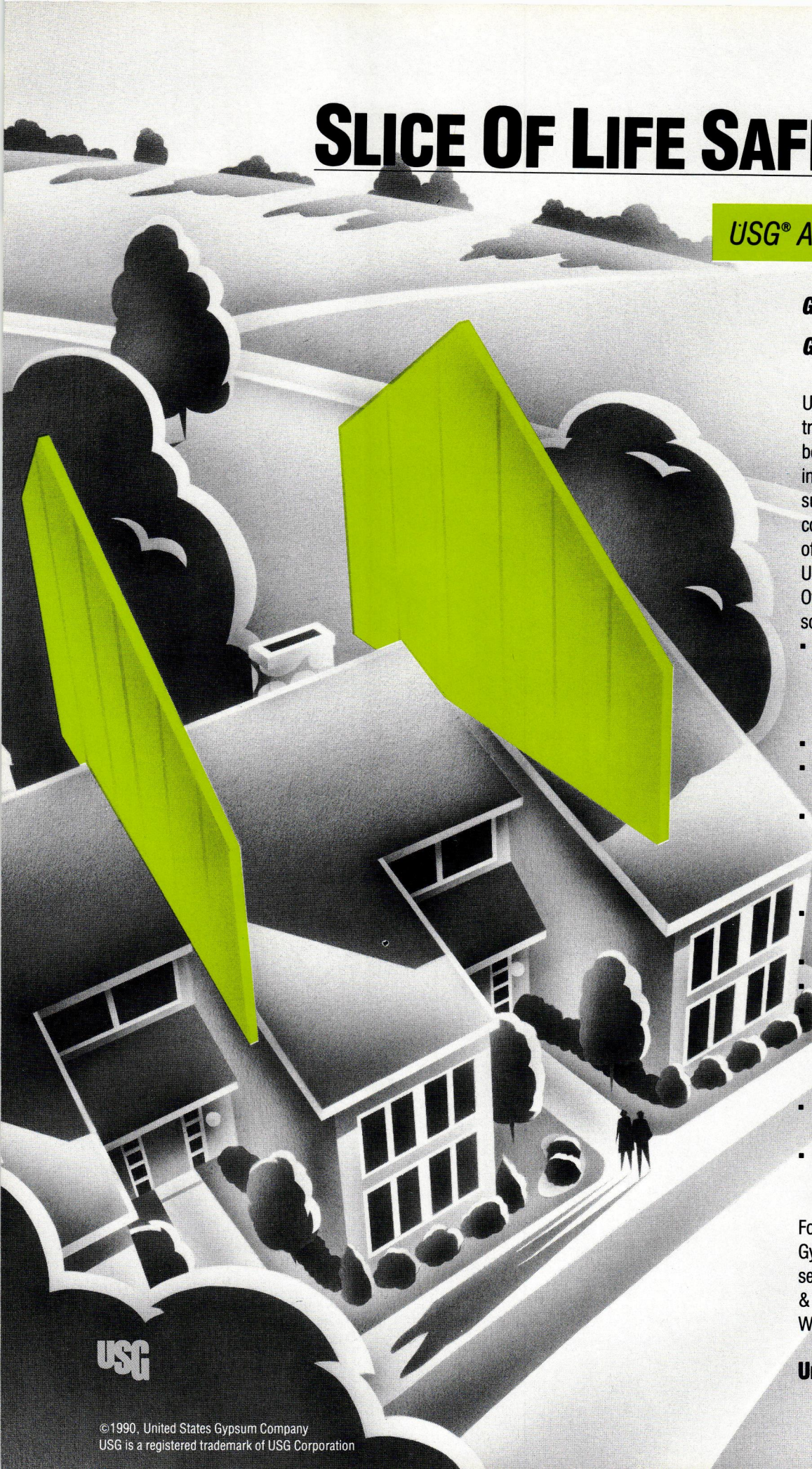
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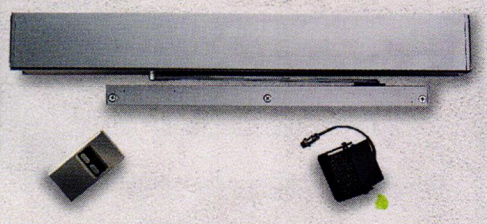
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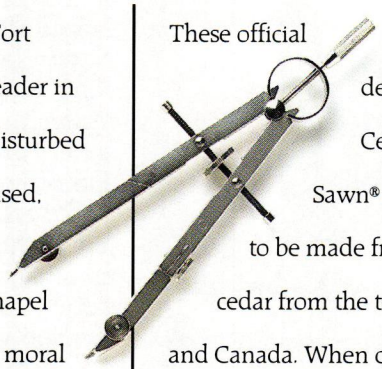


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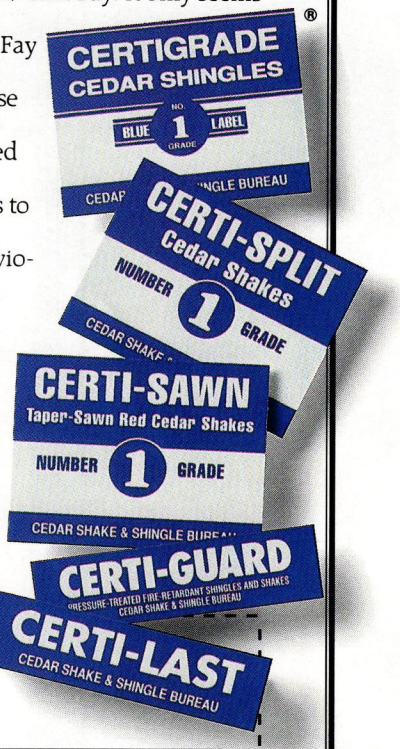
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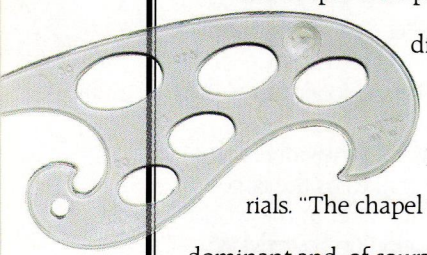


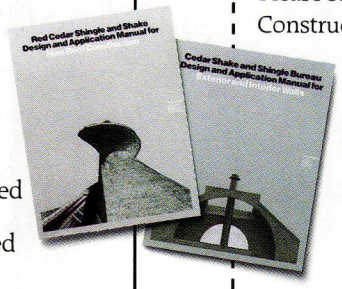
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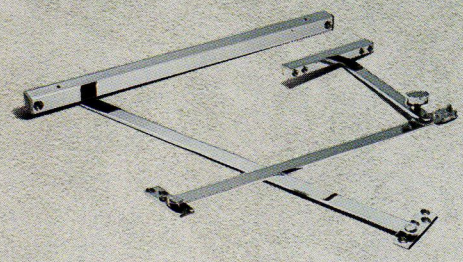
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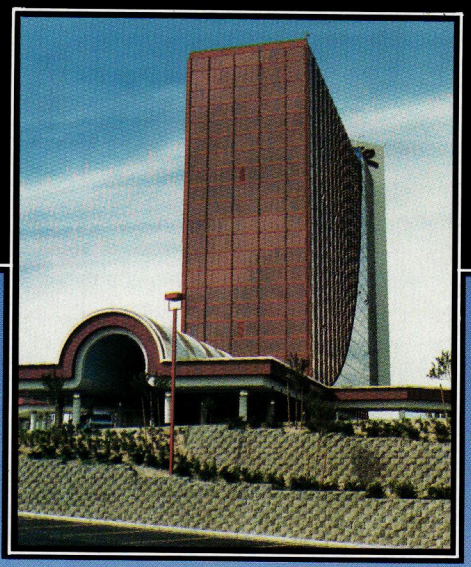
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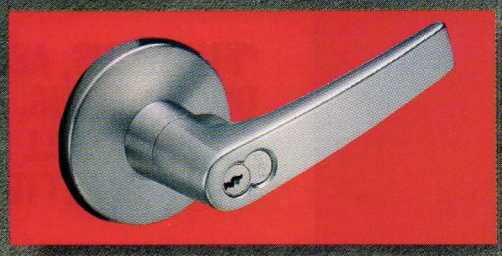
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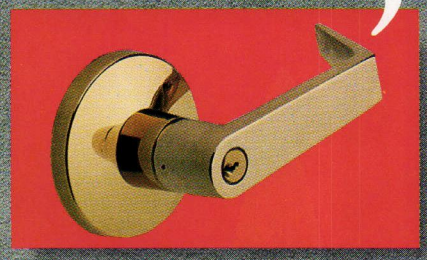
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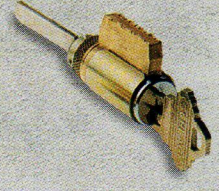
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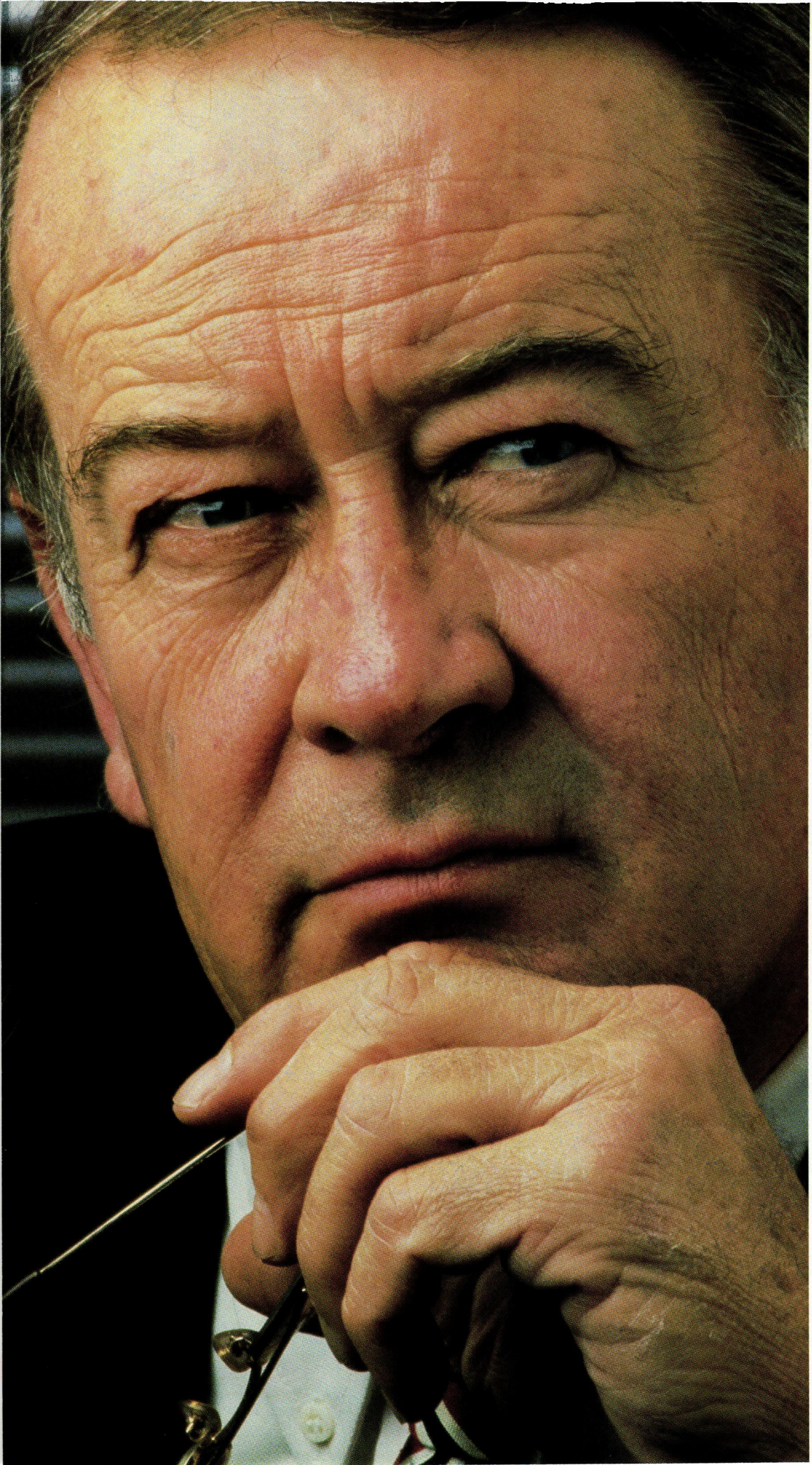
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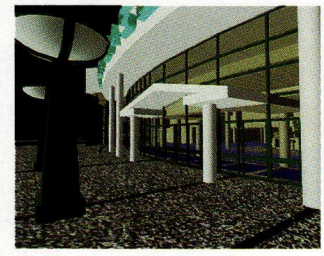
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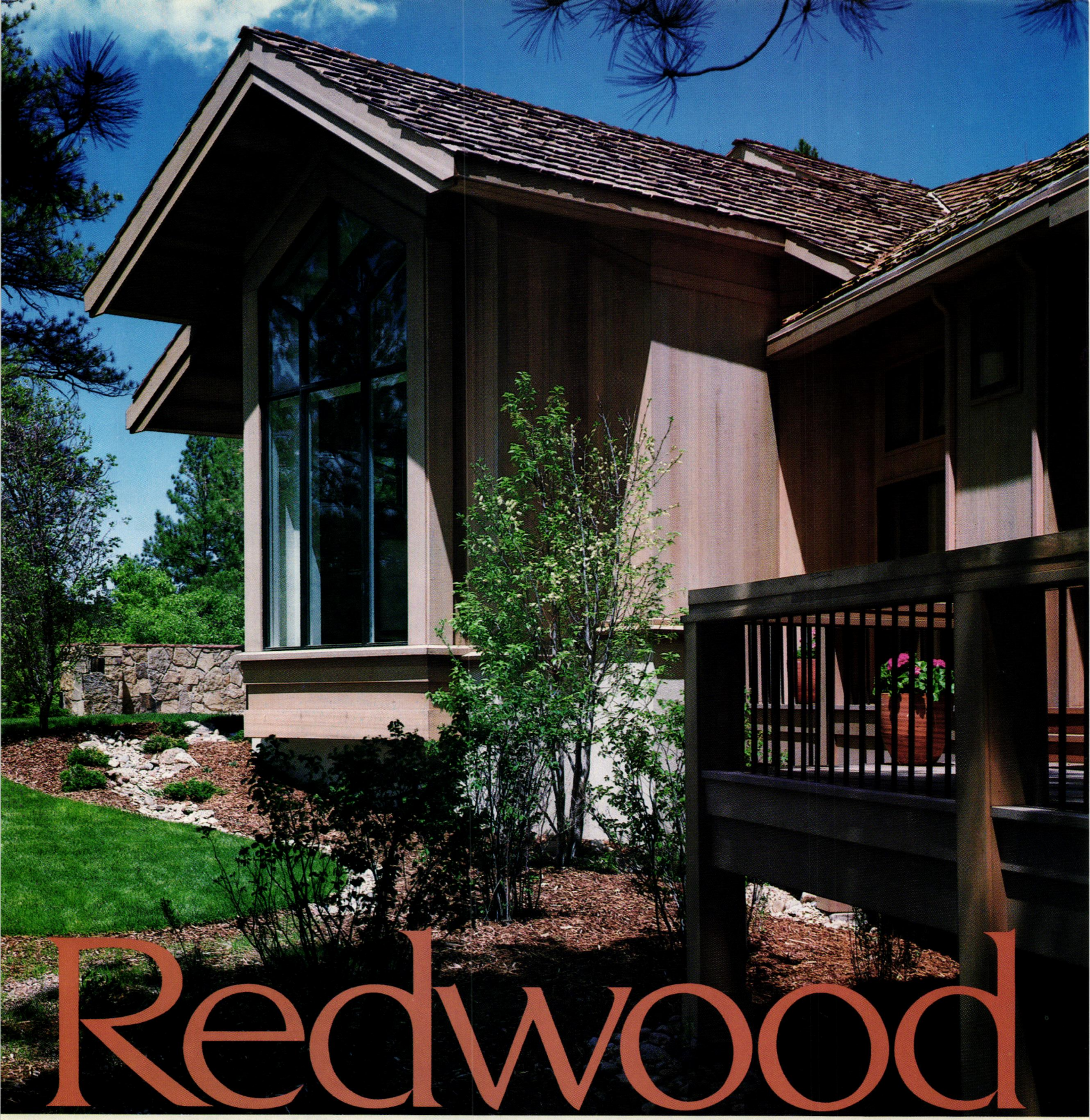
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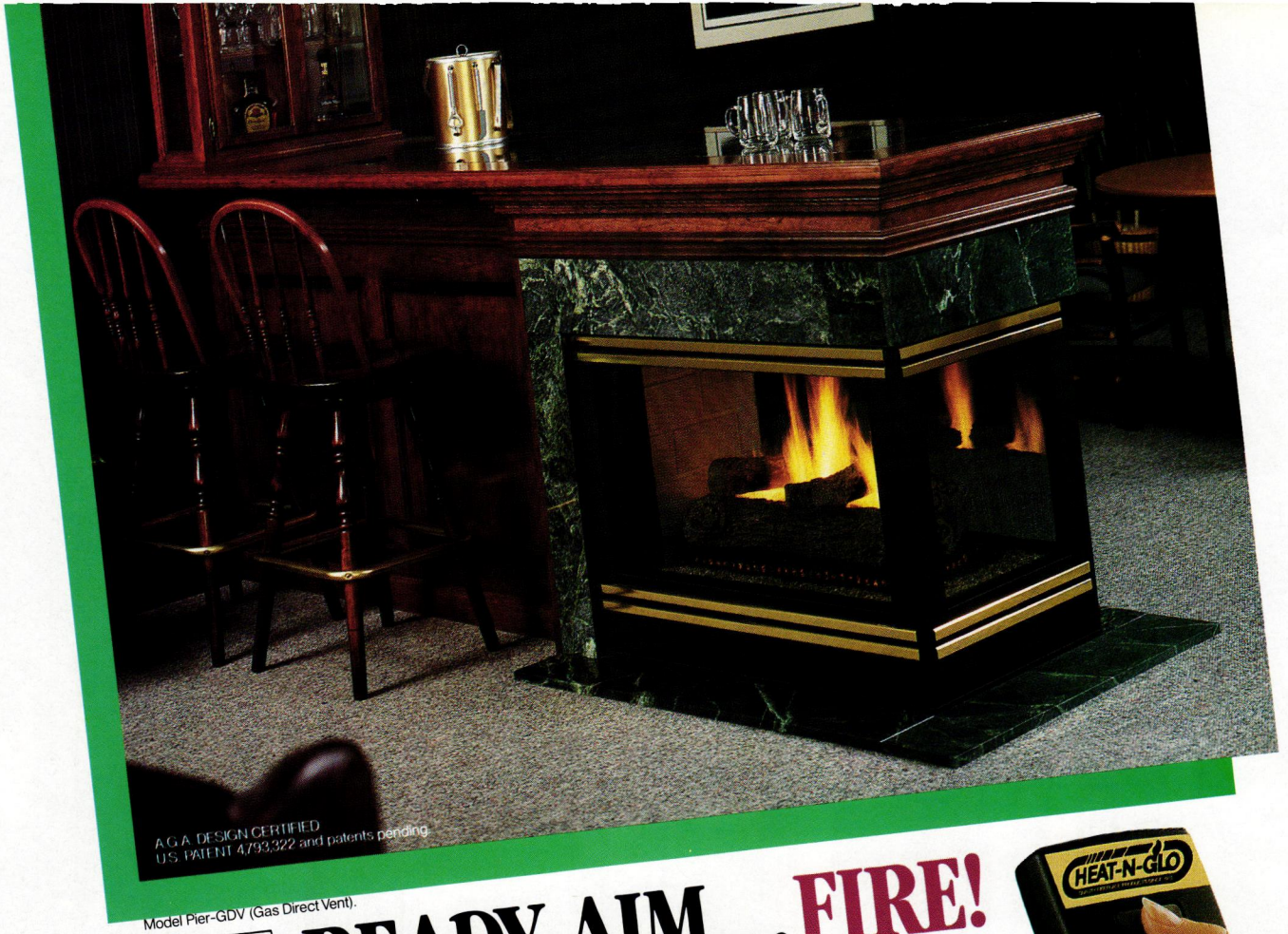


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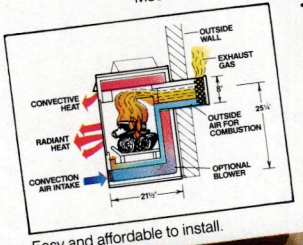
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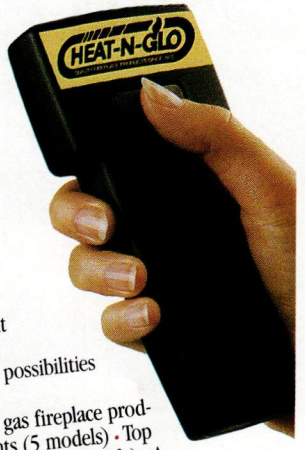


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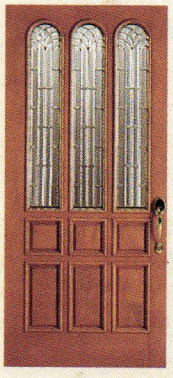
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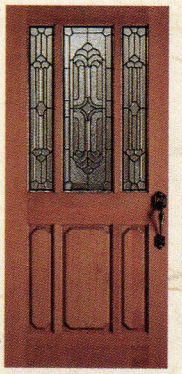
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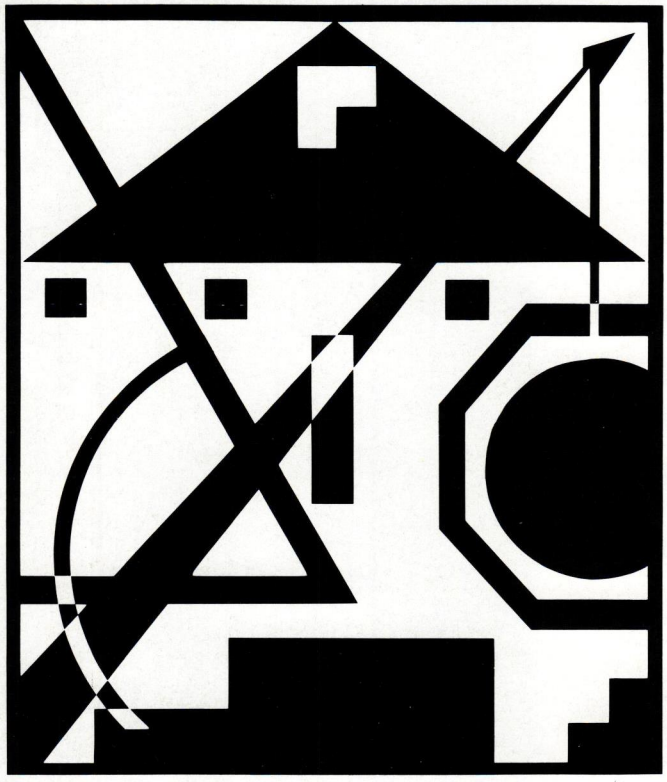
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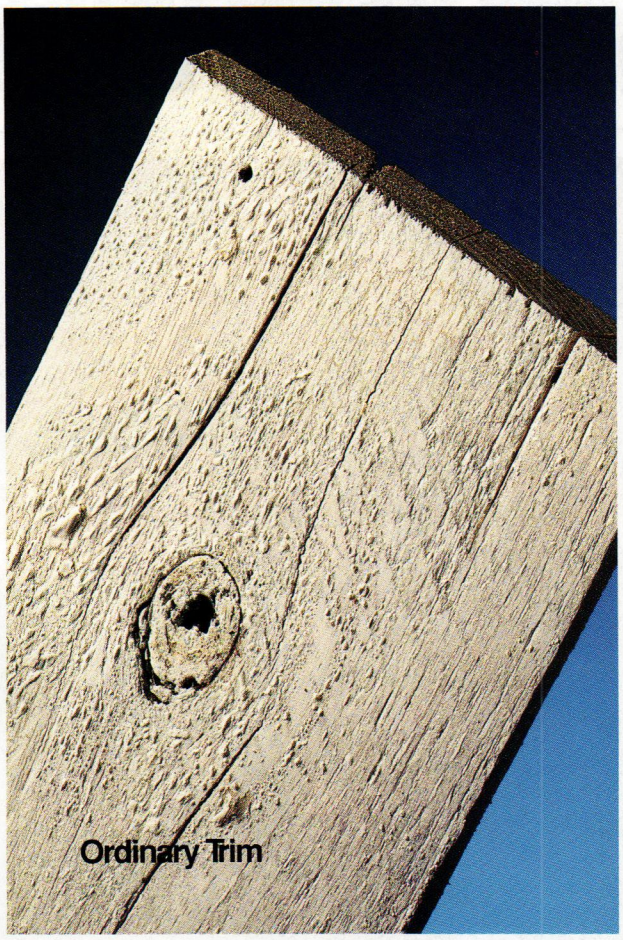
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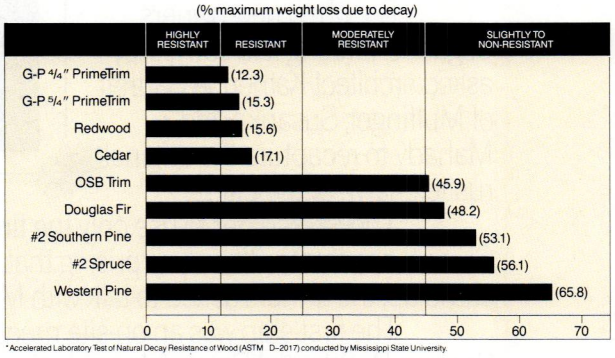
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PrimeTrim offers you a lot of flexibility. It comes in standard construction widths and two different thicknesses. It is available in both smooth and textured surfaces, and is ideal for interior or exterior applications. Use it around doors and windows, as fascia, friezeboard, decorative trim or soffit (it is available with a plowed back). PrimeTrim's versatility opens unlimited design possibilities.

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(% maximum weight loss due to decay)



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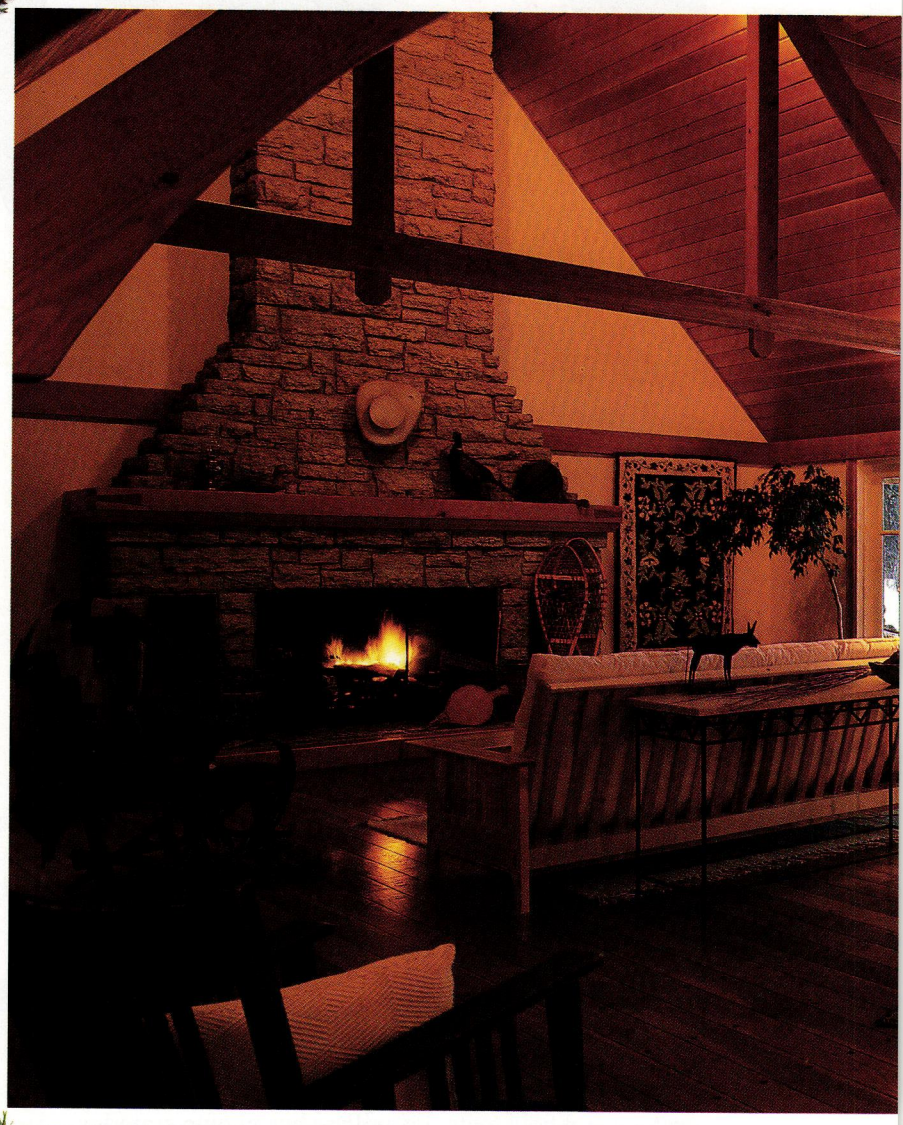
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THE FIRST THING WE DID TO HELP REMODEL THIS OLD HUNTING LODGE WAS



This large, beautiful room is the centerpiece of what was once an exclusive hunting lodge. Built in 1930, the property was converted to a single family residence in the early Fifties. But 40 years of paint, plasterboard and paneling had all but hidden its original elegance.

So, when new owners began renovating it in 1991, they asked architect Katherine Cartrett of Mulfinger, Susanka and Mahady to recapture the original rustic charm of the place.

They asked her to use only the finest high performance building products available. Given those terms, it's not surprising that, when the subject of windows and doors came up, the owners asked to talk with Marvin.

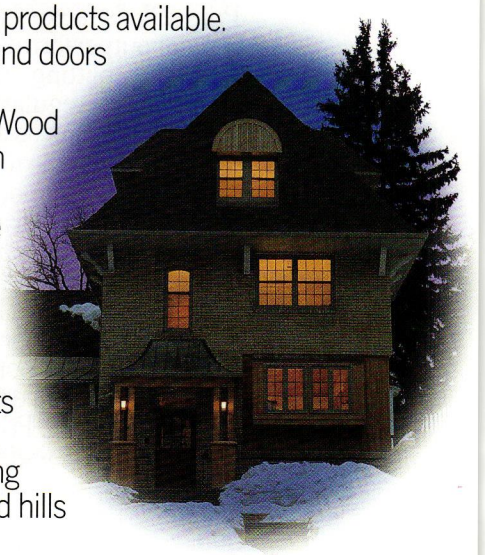
The first step was an on-site meeting. Nick Smaby from Choice Wood Custom Residential Remodelers was there. So were representatives from the Marvin dealer and distributor.

One by one, they inspected every opening in the home. Then the entire group sat down and planned the job out.

Sizes were discussed. So were shapes, styles, energy efficiency, maintenance and budgets.

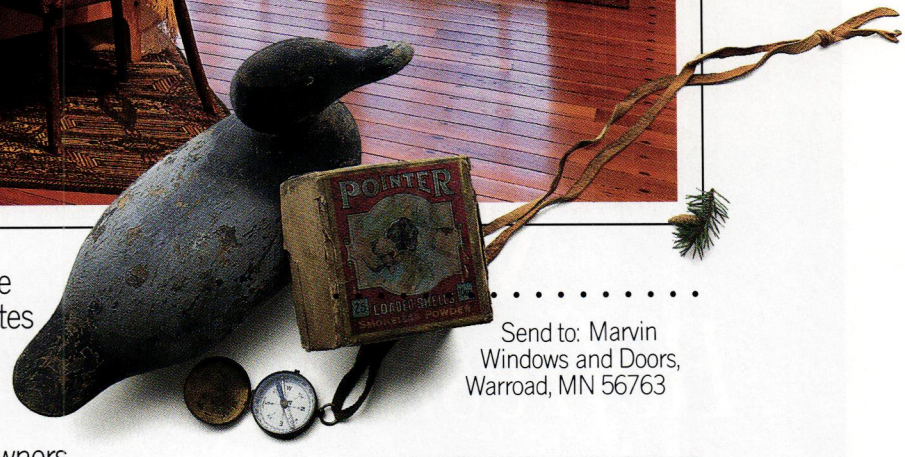
By the end of the day, the plan called for a combination of new windows and replacement sash – 46 windows in all. There were eight sets of doors too.

The results of that meeting are pictured above. The Marvin Sliding French Doors add light and open the room to the panorama of woods and hills



START FIRING QUESTIONS.





beyond. And in keeping with the architectural style of the home, each door features custom divided lites and an exterior finish in a color mixed specifically for the project.

Today, this rustic home looks much like the hunting lodge it once was. And if you ask the owners, they'll tell you the key was tracking down the right window and door supplier in the first place.

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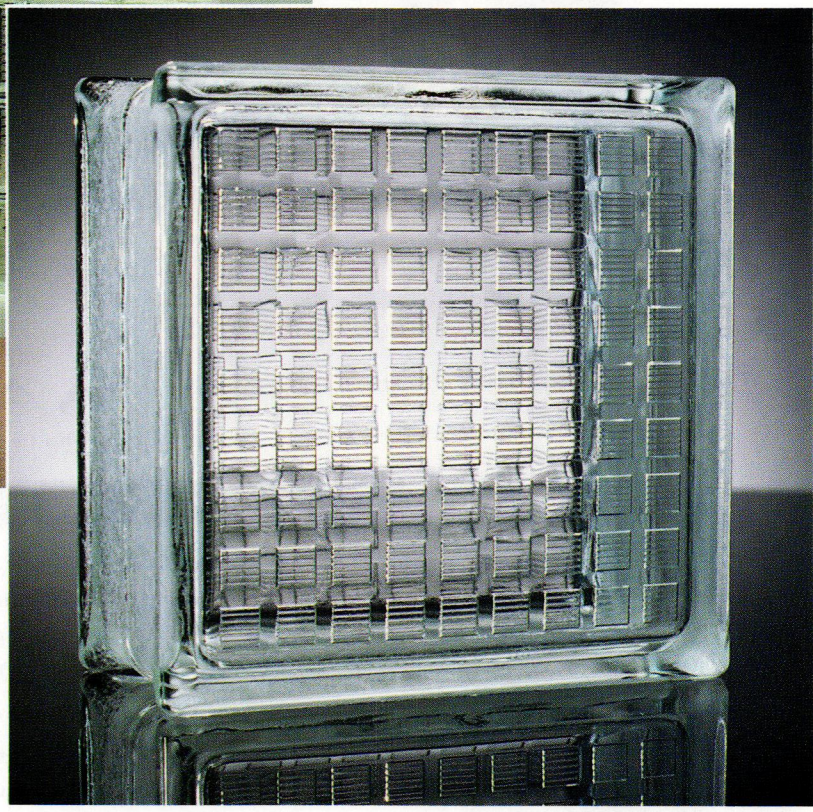
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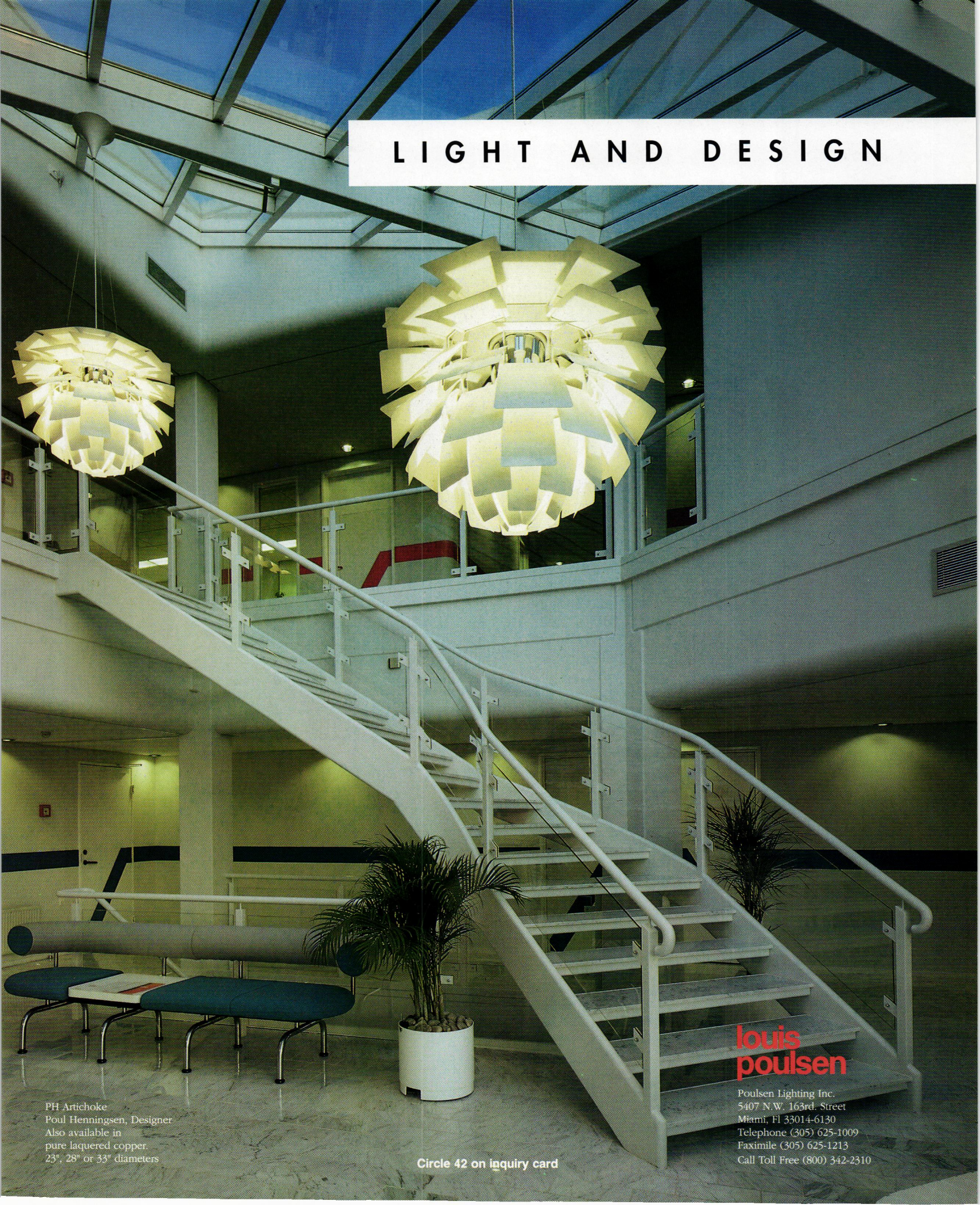
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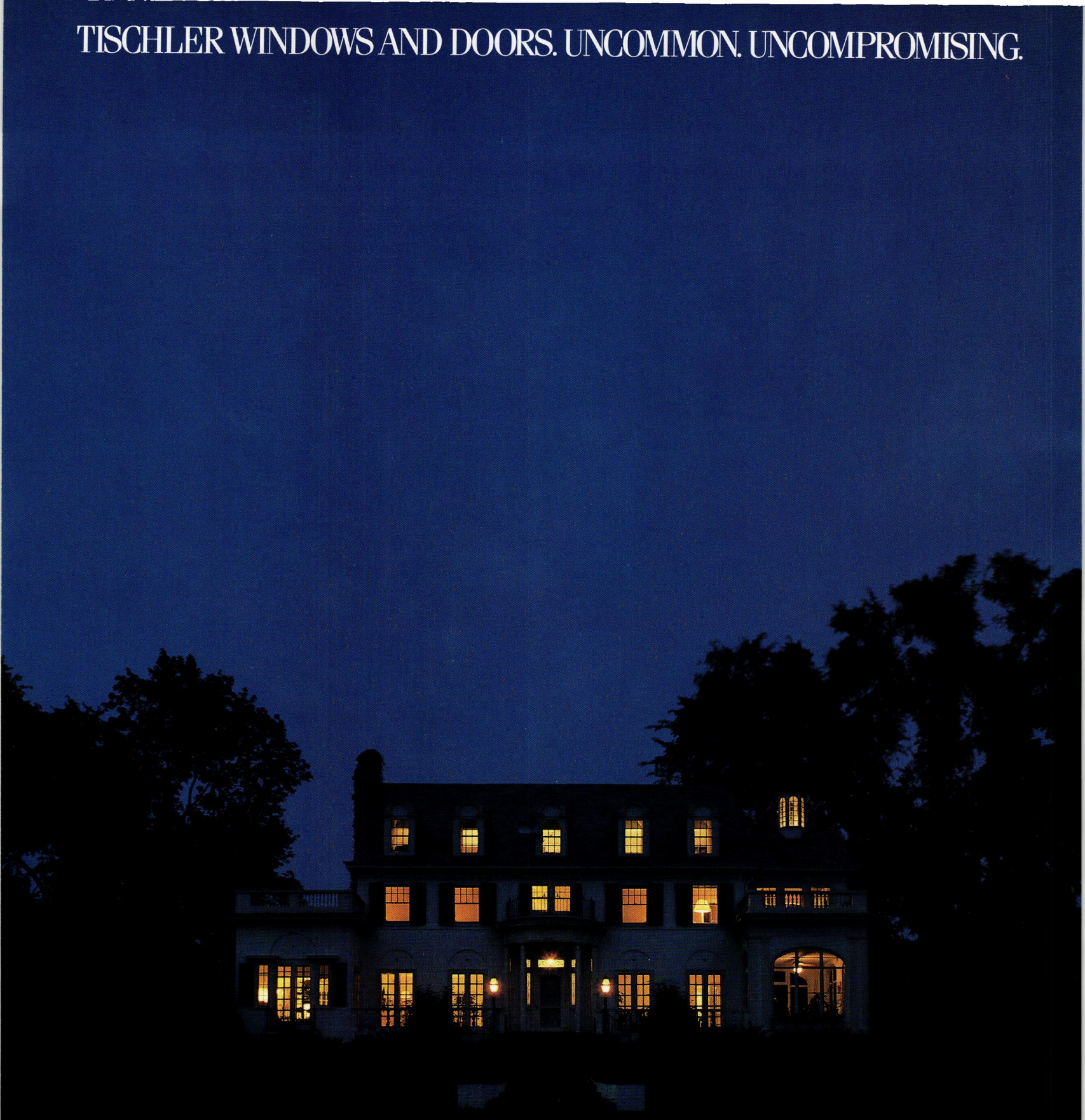
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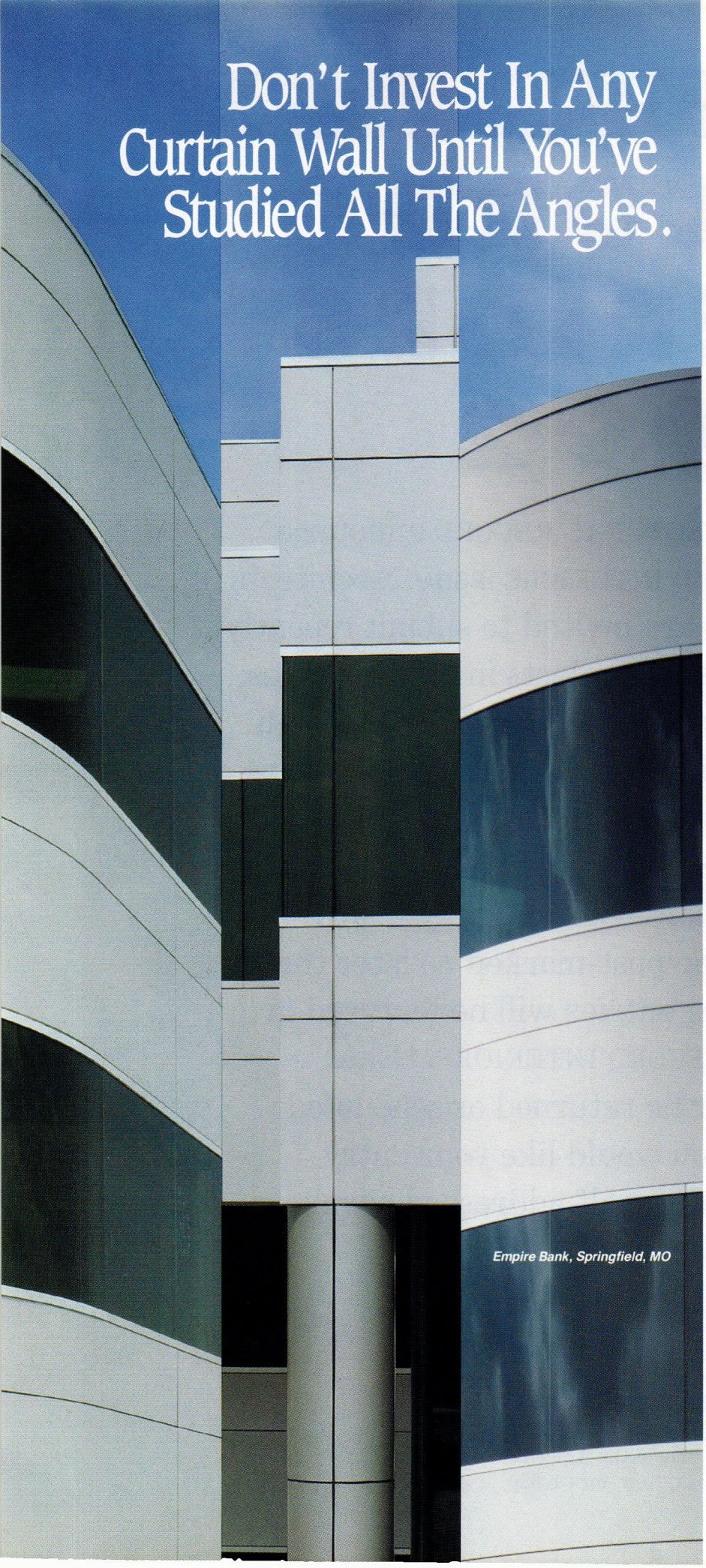


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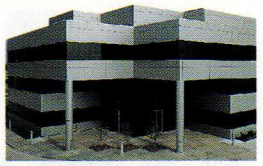
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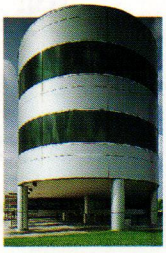


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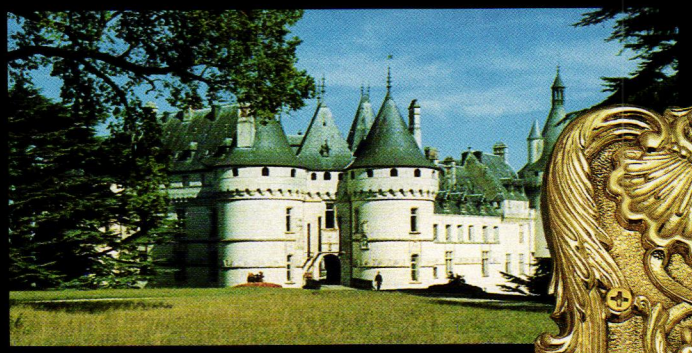
CALL FOR ENTRIES

RECORD INTERIORS 1992

The editors of ARCHITECTURAL RECORD announce the 23rd annual RECORD INTERIORS issue. Architects and interior designers are invited to submit recently completed interior design projects in all categories; work previously published in other national design magazines is disqualified. There are no entry forms or fees, although submissions must include photographs (transparencies, slides, or prints), floor plans, and a project description—bound firmly in an 8½ by 11-in. folder—and be post-marked no later than April 30, 1992. Winning entries will be featured in the September 1992 RECORD INTERIORS. Other submissions will either be returned or scheduled for a future issue. If you would like your entry returned, please include a self-addressed envelope with appropriate postage.

Submissions should be mailed to:
Karen D. Stein
RECORD INTERIORS
ARCHITECTURAL RECORD
1221 Avenue of the Americas
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If this is your idea of a place in the country...



These are some of our ideas on how to get inside.

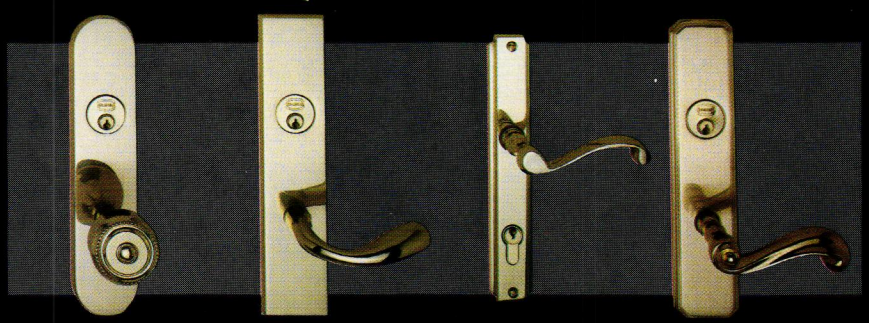
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Shoppers' Oasis



Store entrance canopy membrane structure
H.E. Butt Grocery Company, Laredo, Texas.
Architect William H. Triplett, AIA.

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When H.E. Butt Grocery Company, Texas' legendary food chain, was planning a new superstore for Laredo, Texas, they decided a huge shade structure could be an important attraction for customers in that hot part of the world. Their architect and Helios Industries' designers developed the spectacular tensioned membrane structure pictured here. Besides providing shade and shelter from rain, the 80' tall structure also gives the store a highly visual identity both day and night.

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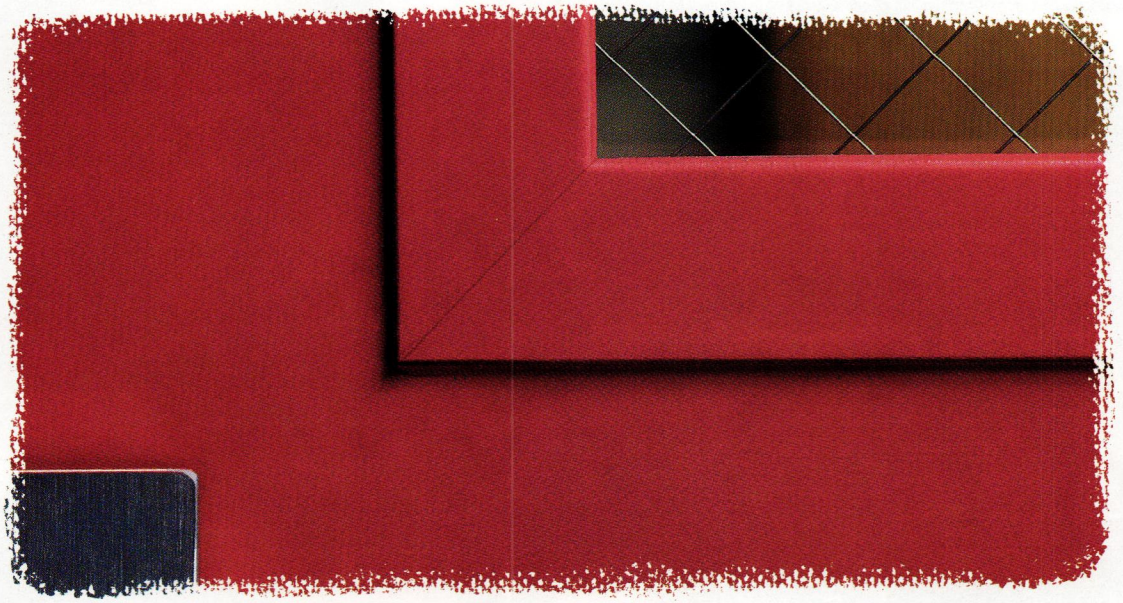
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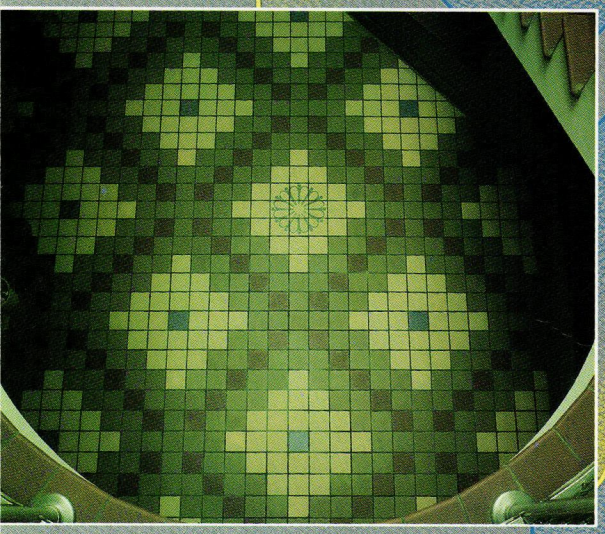
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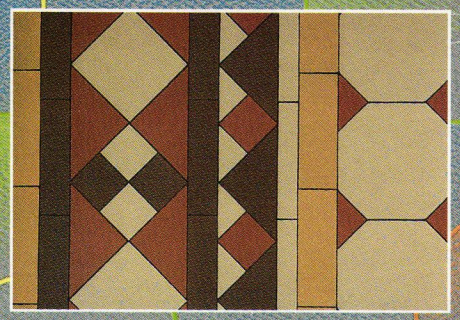
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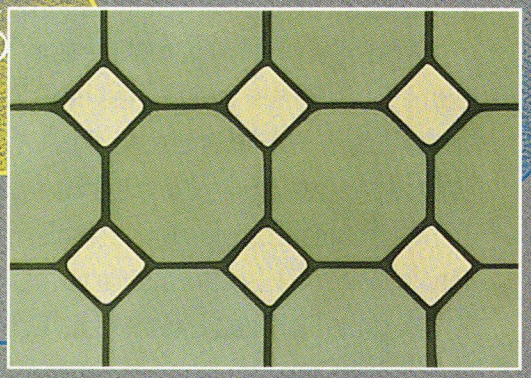
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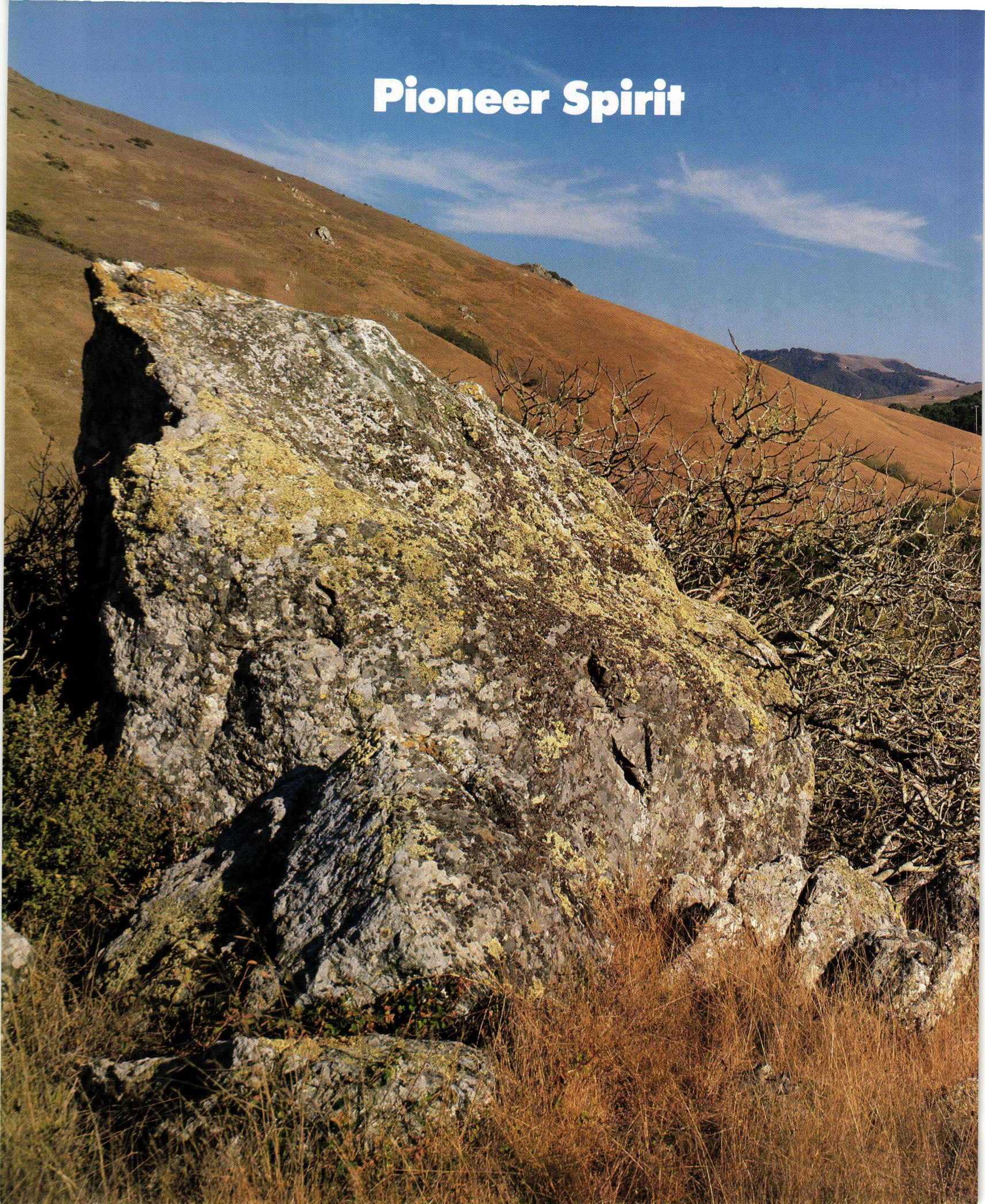
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Building Types Study 696/Record Houses 1992

Every year in April my mother calls from Florida to comment on the current issue of RECORD HOUSES. Although she eagerly points out how much she likes the articles that her son wrote, she is just as quick to note that many of the chosen houses seem a bit odd if not downright eccentric. And of course, she has a point: to a layperson many of the houses featured each April do not conform to most Americans' view of cozy domesticity. But if RECORD HOUSES has one overriding goal, it is less to document the middle ground of single-family residential architecture than to point out innovative solutions to the problems of structure, program, context, and style. With the exception of an exuberant Florida beach house that unabashedly celebrates artistic excess (page 102), this year's eight houses share a certain seriousness—a pragmatism, perhaps driven by the current economy, that combines regional variations on a Modernist theme (pages 90, 110, 124, 132) with a welcome dose of concern for the environment (pages 82, 96, 118). Where luxury exists, it is in the form of grand, double-height living/dining/kitchen spaces that challenge architects and engineers to devise energy-efficient hvac systems. What is more, the nuts-and-bolts industrial esthetic of exposed structure and mechanics has crossed the threshold into the single-family house. It takes a bit of courage—for client and architect—to investigate the possibilities of uncloaked concrete block, corrugated metal, and other materials not often associated with residential design. As the houses featured on the following pages reveal, however, it can be a risk well worth taking. *P. M. S.*


Pioneer Spirit

A courtyard house by David Morton and Thomas Cordell is a protected oasis in a rugged Northern California landscape.



House on a Ranch
Petaluma, California
David Morton Thomas Cordell Architects

There are only two ways to get around the 667-acre ranch on which David Morton and Thomas Cordell placed this new house: on foot or in a four-wheel-drive vehicle. Enveloped by rugged hills and serviced by a gravel road that quickly turns into a dirt path, the house wisely respects its setting. "This terrain dictates that anything placed on it be as simple as possible, just to survive," explains Morton.

The two architects—who split their time between residences/offices in New York, Maine, and now California—let Mother Nature make many of the big decisions about siting and orientation. Nestled in a valley, the house occupies the most protected spot on the estate—not surprisingly, the same place where a previous owner had built a small metal shack. "We wanted the house to rest on the land, rather than perch on it," says Cordell. Comprising two 100-foot-long structures set against the prevailing winds, the house forms a courtyard oasis of order and right angles. Sharply pitched metal roofs (4/12 for the buildings and 2/12 for the walkways) allow the winter sun to hit the courtyard, while the corrugated, galvanized-steel roofing and siding provide a low-maintenance exterior that also resists the occasional brush fire.

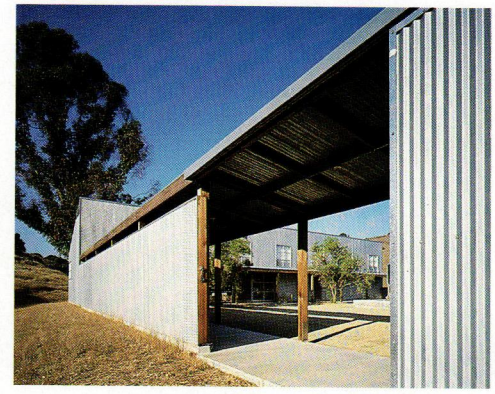
Although responsive to its climate and topography, the house is a crisply defined object that draws clear lines between the protected sphere within its walls and the untamed environment beyond. To maintain this distinction, the architects kept the perimeter of the compound free of shrubs, plantings, or landscaping. Like Spanish missions built in the area since the 16th century, the house revolves around a courtyard whose covered redwood walkway is an architectural frame within which nature can be admired. Perfectly calm, the square courtyard is a place to relax in a chair or cultivate neat rows of grapes, roses, cactus, and lettuce. A poured-concrete pool rises two feet above the dirt-and-crushed-stone yard, while six olive trees offer shade. Straightforward in its design, the courtyard avoids symmetry, offering no axes between wall openings and repeating no two elevations. The result is a compound reminiscent of a Western frontier town, an effect the architects say they noticed only after the building was completed. Rather than being products of conscious imitation, any similarities with vernacular buildings are simply responses to the same climate and conditions that shaped earlier generations of structures.

A set of two 2-by-6 wood-frame structures with prefabricated roof trusses, the house sits on a concrete slab on grade. The north building contains the main living-dining space, a kitchen, master bedroom, a work studio, and a garage. The south building houses two guest rooms, another work studio, and a second garage large enough to be converted into an office should the need arise. Although the house is surrounded by spectacular scenery, the architects didn't want to dish out views at every turn. "The landscape is almost *too* compelling," explains Morton. So the architects saved the best views for the living-dining area and kept most other windows high so attention is directed up toward the mountains.

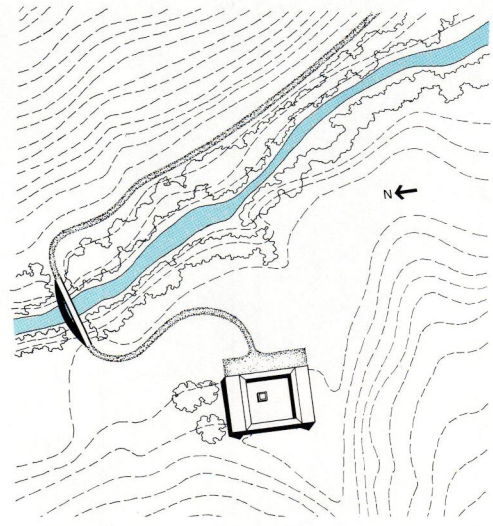
Simply defined with white sheetrock and pitched ceilings, the interiors are as efficient as the plan. Epoxy-varnished concrete floors and birch storage units provide subtle contrasts in color and texture, while sunlight offers animation. In the main public room, a free-standing fireplace with sliding steel panels divides living and dining areas. Off-the-shelf components such as wood doors and standard aluminum windows are supplemented with decorative tongue-and-groove birch grids and sliding exterior metal panels that protect all glazed surfaces when its residents are away. *Clifford A. Pearson*

© *Tom Rider photos*





Like many farm buildings in the area, the wood-frame house is clad in corrugated steel, making it easy to maintain and resistant to brush fires. After crossing a new bridge over a creek on the eastern edge of the property (site plan, below), one enters the compound through an opening in the courtyard wall (top). Another opening on the opposite side of the yard leads out to the mountains beyond (above and opposite). The two parallel buildings comprising the house are oriented to block the strong winds that can sweep through the area and are enclosed by courtyard walls to keep deer out.











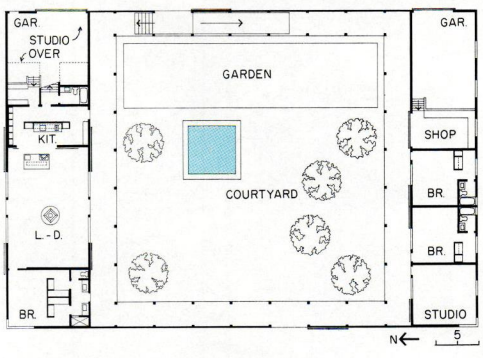




The interiors feature simple materials such as epoxy-varnished concrete floors, sheetrock, and birch furniture. The living/dining room, located in the north building, is divided by a freestanding fireplace equipped with steel panels that slide up and down with the help of counterweights (top left and opposite). Metal panels also slide across to protect windows when the residents are away. Storage units in the kitchen (center left) and guest rooms (bottom left) are made of birch.

Credits

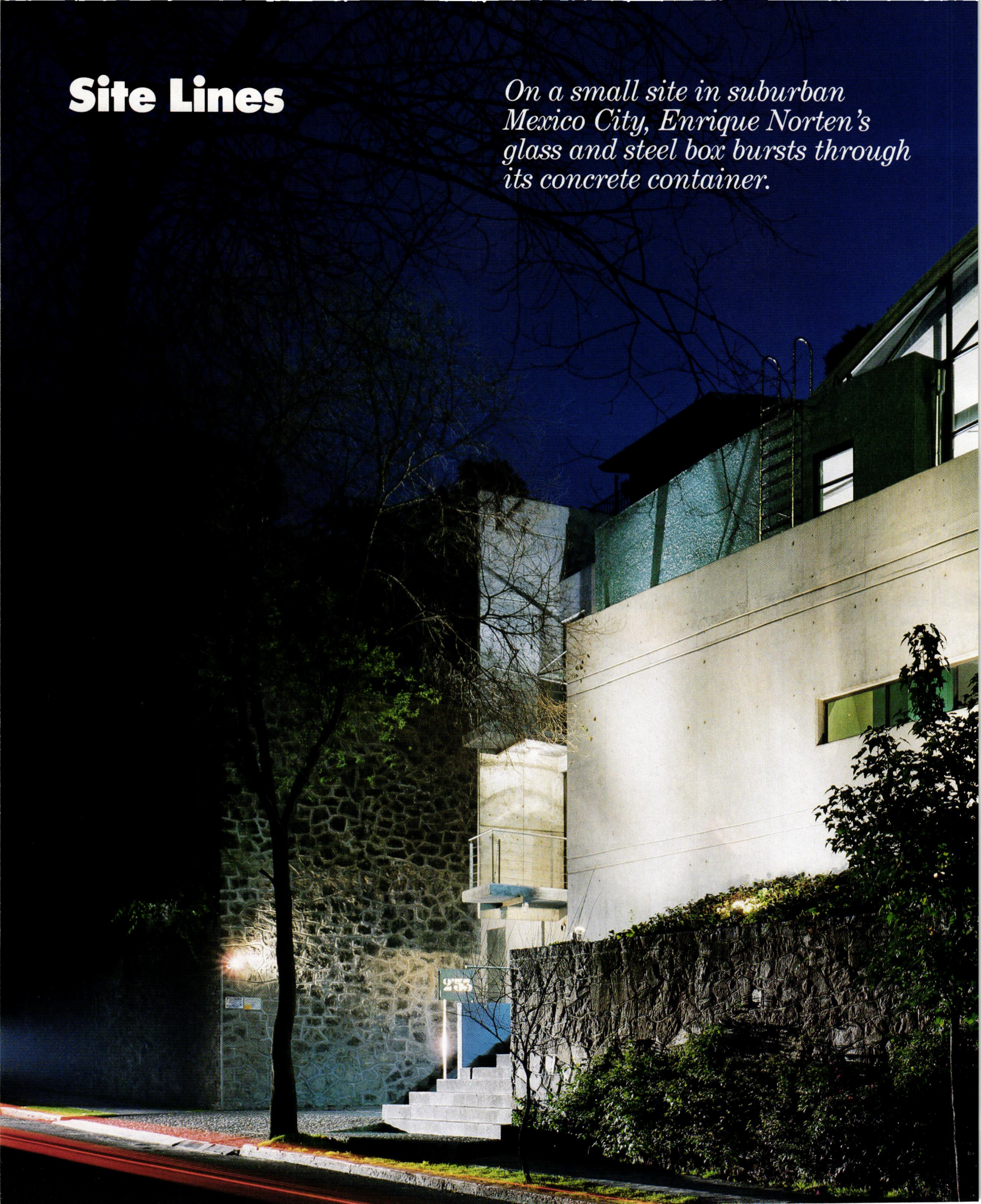
House on a Ranch
Petaluma, California
Architect: *David Morton Thomas Cordell Architects—David Morton, Thomas Cordell, principals*
Engineers: *Edward B. Beattie (structural); Struber-Stroeh Associates (mechanical)*
General Contractor: *R. V. Stich Construction; Petro Construction (roofing and siding)*





Site Lines

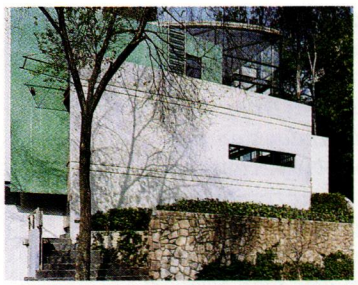
On a small site in suburban Mexico City, Enrique Norten's glass and steel box bursts through its concrete container.

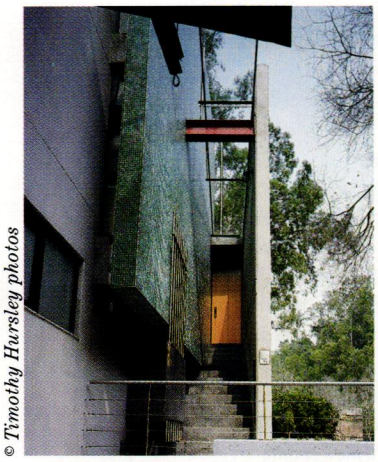




Ortiz House
Mexico City
Taller de Enrique Norten y Asociados (TEN), Architect

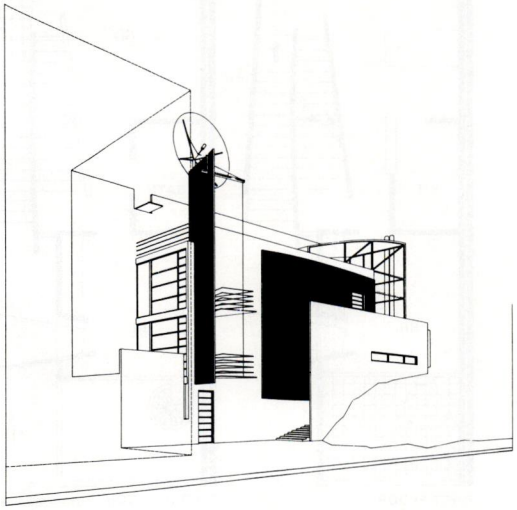

TEN 90





© Timothy Hursley photos

Since the Ortiz house is on a heavily trafficked thoroughfare that connects suburban Mexico City with downtown, Enrique Norten visually and acoustically screened the interior with parallel planes of concrete and turquoise ceramic tile (opposite and top). Between the two is the front door (above). Set at the base of a steep ravine, the house has a wall that doubles as retaining enclosure for the terraced garden of the client's principal residence located above (drawing below).



"I'm a Mexican architect, so what I do is Mexican architecture," observes Enrique Norten. Although Norten's buildings may not sport the vividly colored surfaces that many Americans are quick to associate with south-of-the-border architecture, they are no less indigenous, combining, as they do, traditional construction techniques and Mexico's mixed cultural heritage.

For client Dr. Hugo Ortiz, Norten was able to further explore the union of local building methods and worldly design references that he had studied in earlier commercial projects [RECORD, February 1990, pages 84-87]. Ortiz commissioned Norten to design a house for his soon-to-be-married daughter and her future husband on a 1,500-square-foot leftover lot located at the base of the family's hilltop villa in the growing Mexico City suburb of Bosques de las Lomas. Although Ortiz's daughter announced an abrupt change in plans after the house was designed, Ortiz himself chose to proceed with construction of the honeymoon-cottage-turned-rental-apartment according to Norten's original scheme.

To maximize buildable area on the tiny parcel, Norten pushed his structure to the edges of the nine-foot setbacks required by the neighborhood zoning ordinance on three sides of the property. In the rear, the building incorporates an existing 36-foot-high retaining wall around the terraced garden to the main house above, which Norten replastered and painted light blue. Between the garden wall and a streetfront facade composed of layered planes of poured concrete and turquoise ceramic tile is the main living space—an arched double-height cage of steel and glass that rises above a masonry shell (previous pages and top left). Norten reinterpreted the transplanted Spanish Colonial tradition of entering a house through an enclosed courtyard by tucking the main entrance behind the front wall, creating a metal-gated, private allée that steps up the facade (bottom left). By contrast, the laundry room and maid's quarters are entered directly from the driveway.

Inside, a structural grid of varnished steel I-beams and hollow columns supports the two-story living room and mezzanine study (following pages), while wire cross-bracing further enhances the drama of a barrel-vaulted concrete ceiling. An angled staircase screens the dining room from the entrance, and defines a narrow passageway to a small kitchen and a bedroom beyond (plans overleaf). Upstairs is the master bedroom, which like the downstairs bedroom is marked on the exterior by a rhomboid-shaped, cantilevered steel and concrete balcony.

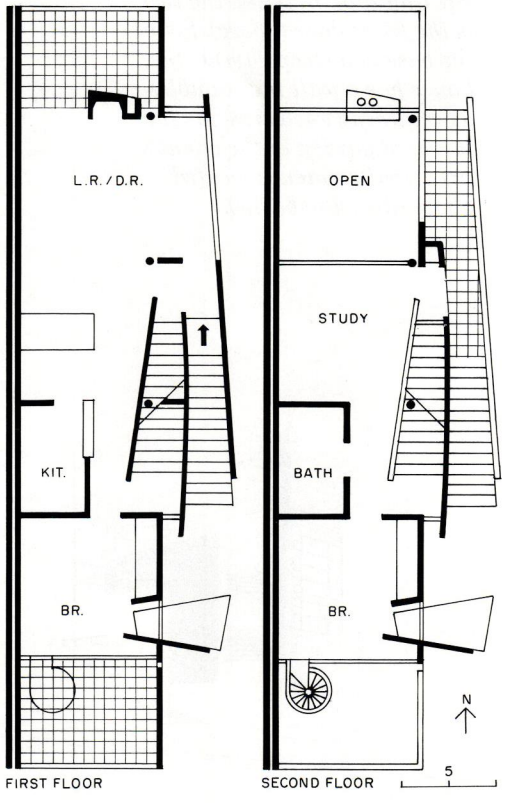
Although the glass-and-steel esthetic seems linked to a building tradition of international Modernism, Norten has not turned his back entirely on the architectural roots of his native Mexico. He is wary, however, of what he considers a clichéd use of attention-getting, saturated "Mexican" colors by his generation of architects, and like better-known compatriots Luis Barragán and Ricardo Legorreta, has also manipulated color and the harsh Mexican sunlight, but to altogether different effect. Norten opts for more muted tones: the mossy green and yellow plaster of interior walls, chocolate brown of seemingly porous lava stone floors, and purple-iris paint of the fireplace. He saves his eye-catching drama for structural gymnastics like the metal cage bursting through its masonry container.
Karen D. Stein





Norten ganged an interior and exterior staircase along the front of the Ortiz house, buffering living spaces from the busy street. Slot windows on the ground floor block views of passing cars but frame trees in the distance. Varnished steel I-beams bracket the two-story living room and help support the curved poured-concrete ceiling (bottom left and opposite).

Credits
Ortiz House
Mexico City, Mexico
Owner: *Dr. Hugo Ortiz Dietz*
Architect: *Taller de Enrique Norten y Asociados (TEN)—Enrique Norten, principal-in-charge; Bernardo Gómez-Pimienta, Juan Carlos Tello, Carlos Ruiz de Chávez, Sergio Juárez, Gustavo Espitia, Luis Muciño,project team*
Engineers: *Ismael Colmenares (structural); Javier Aguerrebere (mechanical)*
Consultant: *Katherine Grimm (landscape)*
General Contractor: *Enrique Juárez*





Large as Life



A little house in rural Vermont gains both stature and livability from urbane ideas.

Dennison/Peek House
Monkton, Vermont
Brooks & Carey Architects



Turner Brooks owns to a certain cheek in drawing connections between "my little stick-built New England houses" and the splendors of the Italian Baroque—which he came to know well on his 1985 sabbatical at the American Academy in Rome. But the connection is there if one focuses on the qualities of motion and emotion so common to both.

Not that Brooks is shy about metaphor: he habitually likens buildings to vehicles or vessels—trucks or trains or boats—and these to animals also poised for movement—anthropomorphism at one remove. The Dennison/Peek house brought to mind a tugboat, though coal tipples and crickets were also evoked.

A dot on the map of northwestern Vermont, the town of Monkton lies in the wooded foothills of the Green Mountains that rim the broad valley where picture-book farmland stretches alongside Lake Champlain. The house itself perches in a low meadow only 100 yards from a pond big enough to be called a lake anywhere but in New England—certainly big enough to sustain a marine allusion.

Like Brooks, the owners are year-round residents of exurban Vermont, too seasoned to romanticize rusticity. Both journalists, he for a local newspaper, she for a wire service, the couple wanted a simple affordable home for themselves and their three-year-old son, but one enlivened by the telltale quirks that differentiate other houses Brooks has built nearby. The result is a house both more livable and more interesting than its size or budget would suggest.

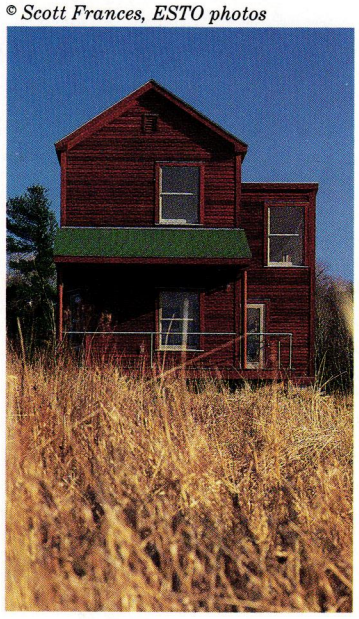
Brooks notes with satisfaction a construction cost of $85 per square foot, which he attributes to the sage use of a vernacular—conventional building methods, familiar details, off-the-shelf materials—more often seen as a design statement than as a means to contain costs. A domestic vocabulary of clapboard, gable, and porch also suits the structure's diminutive size: 1,300 square feet in the main floor and master-bedroom "bridge," brought to a potential 1,650 square feet by basement expansion space.

What sets the house apart (and hints at the Baroque) is its restlessness. Unlike neighboring farmhouses that bind themselves to the land with walls and orchards and outbuildings, the Dennison/Peek house seems to hover in its hayfield, which, cut but once a year, grows up to and obscures the foundation. In addition, its forms shift as the viewer moves around the structure, breaking down into tense and often awkward assemblages that regain repose when seen in elevation. Yet the facades too support only a tenuous relationship between the taut north side of the house and the generously curved and windowed bow facing the pond on the south. Porches add stature as their shed roofs converge on the gabled bedroom tower.

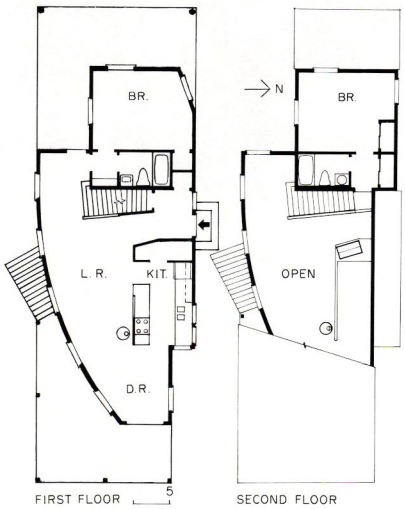
The sense of movement is carried inside by the upward thrust of the ceiling and the outward surge of the main living area. Door-sized on the east, the space swells to full house width on the west before contracting again at the stair and stacked bedrooms. *Margaret Gaskie*

Credits
Dennison/Peek House
Monkton, Vermont
Owner: *Meg Dennison/Tim Peek*
Architect: *Brooks & Carey Architects—Turner Brooks, principal-in-charge*
Consultant: *Beth Humstone (color)*
General Contractor: *Millbridge Construction*

© Scott Frances, ESTO photos



Among Brooks's rules for the design of small houses is assembling into a single large space (overleaf) those areas—living, dining, kitchen—that would be both tiny and labyrinthine if separated. In the Dennison/Peek house they owe their ordering to the tile-clad inner wall of the kitchen. Bedrooms are stacked in the peak-roofed tower. Spatial continuity is reinforced by the big room's upward and outward sweep as well as white-painted gypboard walls offset with natural wood finishes. Stepped windows in the bowed wall overlooking the pond (bottom opposite) open the space to daylight and views.





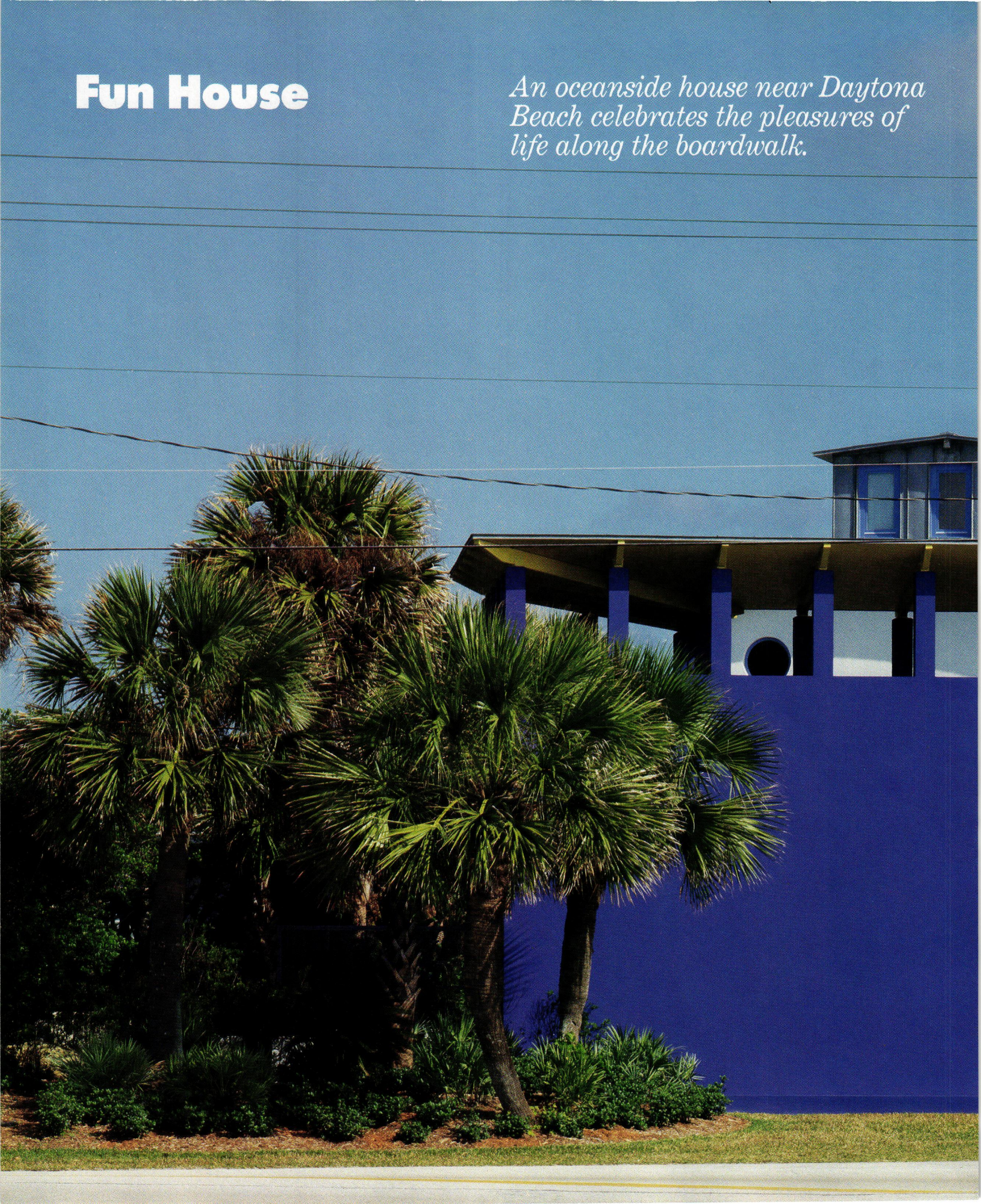






Fun House

An oceanside house near Daytona Beach celebrates the pleasures of life along the boardwalk.





Root Guest House
Ormond Beach, Florida
Steven Harris & Associates,
Architect

Steven Harris is one of a group of American architects who combine Modernist impulses with an appreciation for vernacular regional precedents. In his residential work, Harris has been especially skillful adapting local building types, whether they are silos and barns for a house in Connecticut [RECORD, April 1991, pages 70-75] or motels, lifeguard towers, and boardwalk arcades for an oceanfront guest house recently completed near Daytona Beach, Florida.

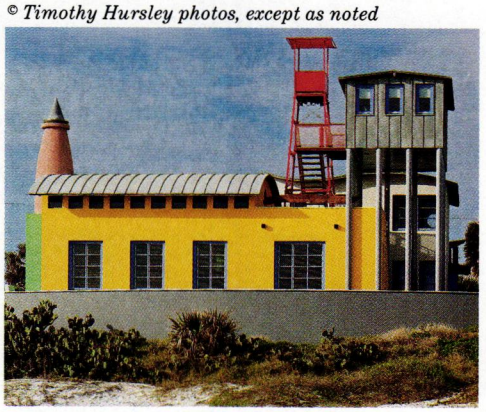
For the Florida commission, Harris found a kindred spirit in client Chapman Root II. Root, a local entrepreneur, collector of vintage automobiles, and great-grandson of the man who designed and manufactured the first Coca-Cola bottle, had purchased an ordinary stucco-clad ranch on a rather extraordinary site—a 75- by 200-foot parcel wedged between Florida route A1A and the Atlantic. Although Root's initial intent was to remodel the ranch and sell it, he chose in the end "to have some fun with the project" by commissioning Harris to design a new 3,500-square-foot guest house (Root's "main" house, designed by William Morgan, is currently under construction a quarter-mile up the beach).

"I thought a lot about what a house on the beach in that town should be," says Harris,"and how it might respond to the authentic culture of the area." To Harris, that culture has less to do with Miami's tile-roofed neoclassicism or Seaside's cracker vernacular than with "the unpretentious, playful, funky, and even vulgar qualities of boardwalk life." And so, each of the vividly hued interconnected pavilions of the Root house refers to some nearby beachside icon. In a few cases the allusion is obvious: a bright-red steel "lifeguard" tower, for example, or a terne-coated metal "pier" building perched atop 23-foot-high steel columns. Other references are subtler: a barrel-roofed living-room wing that echoes the fun houses of Daytona's boardwalk, a two-story pool house whose loggia evokes the porches of the old Ormond Beach Hotel, a bulbous chimney stack that might conjure up the wooden milk bottles of an arcade baseball toss.

Beyond stylistic considerations, Harris had to deal with Daytona's hot climate and its vulnerability to hurricanes. Although seven-foot-high ocean-facing windows in the living and dining rooms allow views of what Root calls "the world's largest backyard," the south facade, by contrast, is virtually windowless, reducing air-conditioning loads on the forced-air hvac system. What's more, Harris placed the house along the site's southern flank to shade the central pool and patio for much of the day. Since the house is separated from the beach only by a narrow strip of dunes, it was designed to resist hurricane-force winds with concrete-block walls reinforced by lateral steel bracing. Reinforcing steel was also used to tie together 18- by 30-inch footings and to connect the pool house to the patio slab. Finally, unlike its wood prototype, the red lifeguard tower here is made of cable-braced, hand-fabricated steel tees.

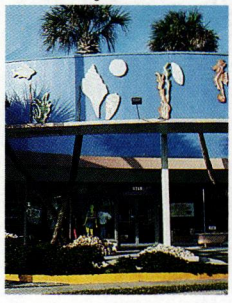
Root had few demands aside from a request that the house be casual, "like a good beach house should be." The house comprises two L-shaped structures—the guest living quarters and a pool house—which together define a courtyard and insulate the complex from adjacent houses and A1A. Five discrete zones—two first-floor bedrooms, a second-floor master bedroom, the pier room, and a small studio in the pool house—all share a stainless-steel kitchen and double-height living room, allowing unrelated guests to use the house at the same time. Several friends and family members have already visited, and their comments, recorded in a log book that Root keeps in the atrium, have ranged from "wow!" to "fantastic!"—just the reaction he and Harris were seeking. *Paul M. Sachner*

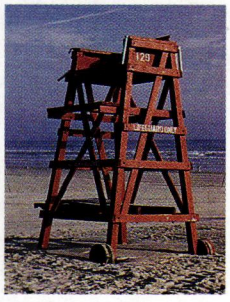
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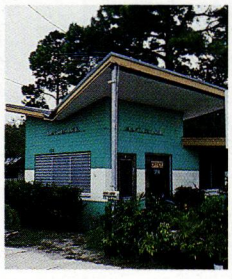


Whether seen from route A1A (previous pages) or from the beach (above), the Root guest house stands out from its beige and white neighbors. Although residents of Ormond Beach at first objected to its strong color and idiosyncratic form, they have come to accept, and even admire, the house as a local landmark. A loggia shades south-facing bedrooms from the hot Florida sun (opposite), while billboard fluorescent tubes set into the ground along the perimeter illuminate the house at night. The house is built of steel-reinforced concrete block, clad in synthetic stucco.

S. Harris photos







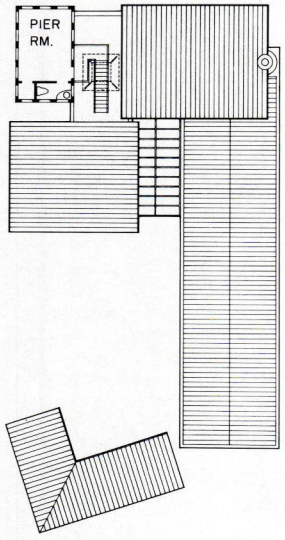
Brightly colored lifeguard stands, motels, and other vernacular structures in the area (three examples shown here) were Harris's source of inspiration.



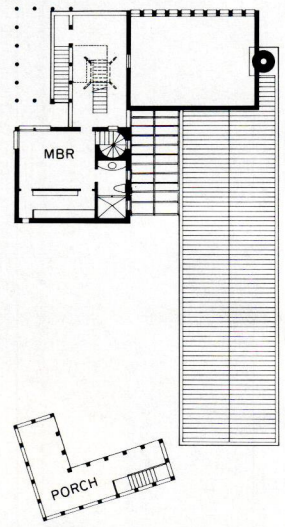


A long narrow site, the closeness of neighboring houses, and the logic of exploiting ocean views all helped determine a plan comprising two L-shaped buildings around a courtyard. Many of the house's most distinctive features are custom-designed. Harris, for example, designed the unusual guitar-shaped pool (opposite). His associate, Lucien Rees-Roberts, produced the pool's glass-mosaic-tile pattern, which separates a deep, 50-foot-long lap lane from a shallow lounging area where bright-yellow cylinders may be used as seating or as cocktail tables. Custom work also marks the atrium (bottom left), which has an African slate floor and a hand-fabricated stainless-steel curtain wall. All terrace rails, including one on the second floor off the master bedroom (top left), are made of laminated heart redwood, rasper finished for an irregular whalebone-like profile.

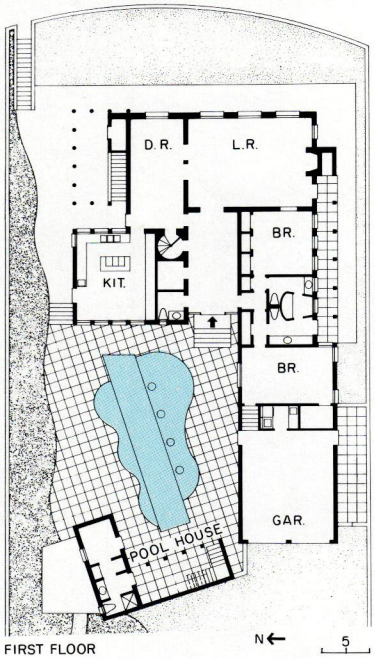




THIRD FLOOR



SECOND FLOOR



FIRST FLOOR











If the interior plan is relatively straightforward, custom and off-the-shelf furnishings create something of a an Antonio-Gaudí-meets-Isamu-Noguchi fantasy world. A 33-foot-long double-height living room enjoys Atlantic views through seven-foot-tall windows (top left), while a suspended lighting "cloud" dominates the adjoining dining room (opposite). Imaginative tilework by Rees-Roberts shows up in the downstairs powder room (middle left) and in other bathrooms (not pictured). Other unusual interior features include a zebrawood circular stair and flamed French limestone flooring. But perhaps the most ingenious device in the house is a counterweighted round mirror in one of the downstairs bedrooms (bottom). Supported by two diagonal tracks, the mirror can be raised or lowered to open or close a 3.5-foot-diameter hole in the wall between the living room and bedroom (middle right). When the hole is open, one can see the Atlantic through the living-room windows; when it is closed, one has total privacy.

Credits
Root Guest House
Ormond Beach, Florida
Owner: *Chapman J. Root II*
Architect: *Steven Harris & Associates—Steven Harris, principal-in-charge; Lucien Rees-Roberts, senior associate; Stephen Brockman, Robert Schultz, Tommy Lee White, project team*
Structural Engineer: *Ross Dalland, P. E.*
Consultants: *Glenn Herbert (landscape architect); R. A. Heintges (curtain wall); Catherine Rahn (art glass)*
General Contractor: *Foley & Associates*



Modern Over Modern





A film producer's house in the Hollywood hills converts the world into pictures.

House for a Film Producer
Los Angeles, California
Smith-Miller + Hawkinson Architects

This house is a machine for viewing. It is a place where you can get lost in the view and hold on to it at the same time. "I feel like I have all the technology of living in the city, but am living halfway up Mount Fuji," is how the client's wife describes it. "It's a house for a filmmaker," says architect Henry Smith-Miller, "and that means it's about controlling the view. It's about how you convert the world into pictures." Everything in this renovation of and addition to a small house in the Hollywood hills has been stripped down to create that sense of control. Starting from a 1950s Modernist structure, New York-based Smith-Miller and partner Laurie Hawkinson have taken the floating planes of Modernism a step further, turbo-boosting them with an array of visual devices and gadgets that turn Modernism's refined and static vision into a shifting cinematic machine for savoring and living in the view.

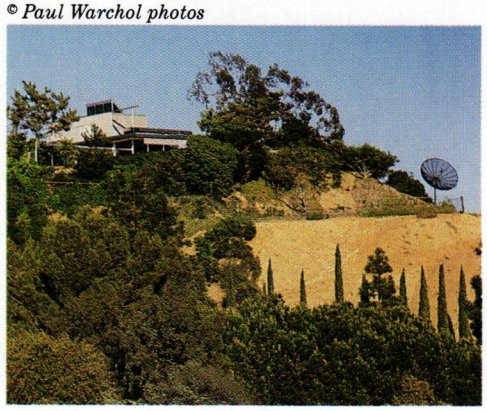
Smith-Miller and Hawkinson began with a classic Modernist condition. The 1956 design, by Richard Neutra associate Donald Poisky, boasted all of the wall-to-ceiling glass, overlapping horizontal planes, and flowing spaces of a high-style Modernist house, but it was also, says the architect, "just a little frame thing, with an open plan and a real sense of economy."

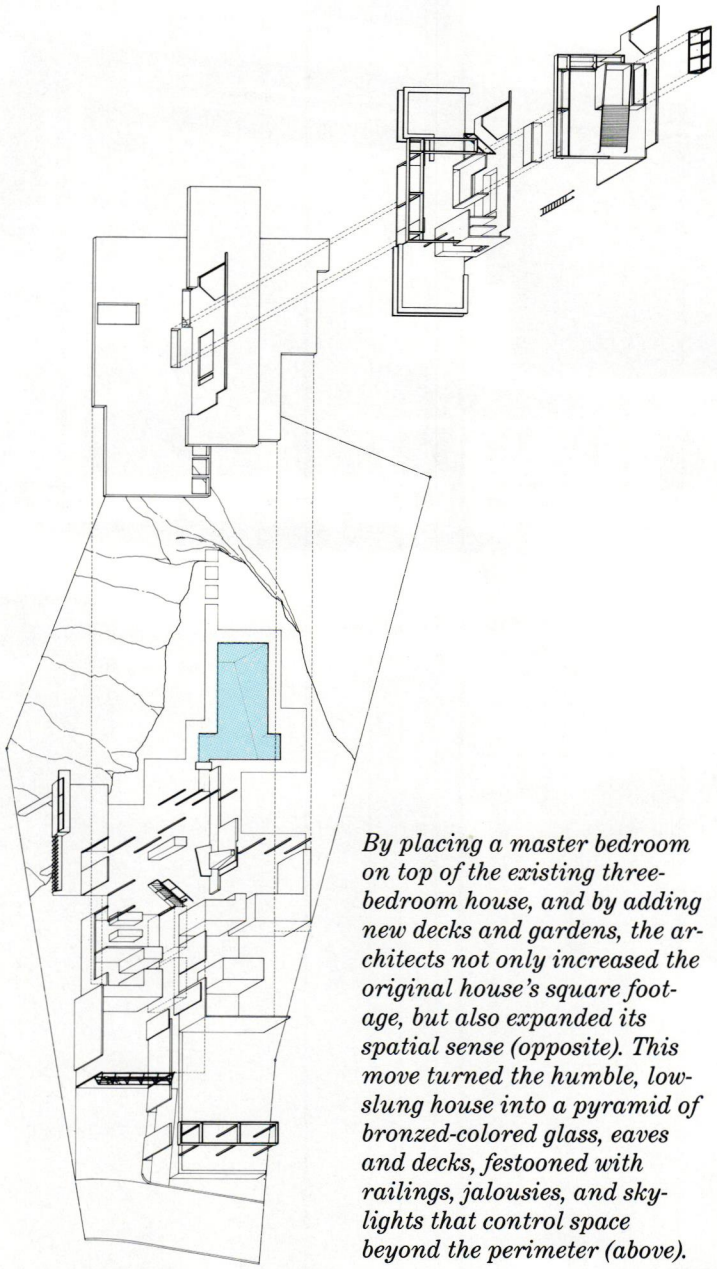
The architects quickly realized that the house was divided into symmetrical compositions in plan and section that gave the house a rather static sense of formality, but also acknowledged the majestic scale of the hills and sea. Both the entrance and the pool axis deviated from that formula, giving the designers a chance to slip in some of their own moves. These were changes and inventions that they believe allow more active links with the world beyond the structure. The most prominent of them is a ship's ladder leading up to a new master bedroom—"a mechanical penthouse placed on top of a Case Study house," as Smith-Miller describes it. The architects then opened up spaces to each other with sliding plywood panels and "captured the spirit of the Case Study houses" with a series of cantilevered roof decks.

Other additions were essentially cosmetic, aimed at making the house work the way it looked. Gray-painted surfaces and soffits are complemented by metallic pieces like a fireplace hood and a custom gray carpet. New low-E glass allows the house to conform to energy codes, and scissor-hinged jalousies extend, when needed, the shade provided by existing eaves. A pivoting door of police-surveillance glass opens up the central east-west axis, mixing views of the eastern hills with reflections from the west. The garage door became a frame for sandblasted plastic glazing that scissors up and out of the way. Gadgets proliferate, from the folding media-center wall to a custom-made rolled-steel trashcan in the kitchen and a motorized skylight cover in the master bedroom. "I don't see them as toys," says the client's wife, "but as necessary additions that allow the house to function."

Smith-Miller agrees, arguing that each of the mechanical additions adds to the interpenetration of inside and outside, and of various interior spaces to each other. He notes the sliding shaving mirror placed in front of the bathroom window that lets you look at yourself and the landscape at the same time, and compares it to the former clerestories that are now at the base of that bathroom, making you sense the continuity of spaces throughout. The house itself fades into gray, until you see only the axes along which the static forms of the building disappear. You are left with an array of frames, pergolas, and planes that serve to control orders of an architecture as it dissolves into the landscape. *Aaron Betsky*

© Paul Warchol photos





By placing a master bedroom on top of the existing three-bedroom house, and by adding new decks and gardens, the architects not only increased the original house's square footage, but also expanded its spatial sense (opposite). This move turned the humble, low-slung house into a pyramid of bronzed-colored glass, eaves and decks, festooned with railings, jalousies, and skylights that control space beyond the perimeter (above).





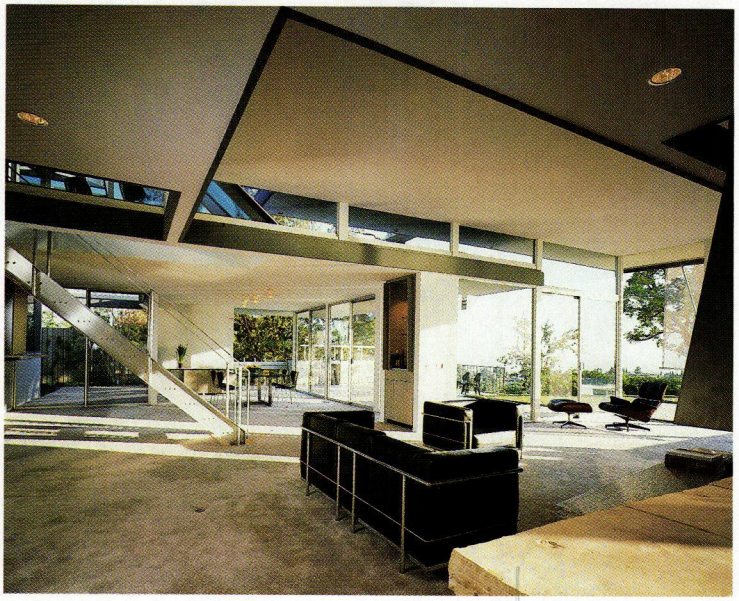




A desert garden filled with olfactory plants, designed by landscape architect Akva Stein, confronts the street (middle left). Stein designed the gardens to extend the palette of the renovation into the landscape, shunning geometry and vertical elements in favor of low desert planting. The front yard is framed by a sand-blasted-stone wall and a new pergola that is, says the architect, "a rhetorical device" that opens up the basic framework of the house for public inspection (top left).

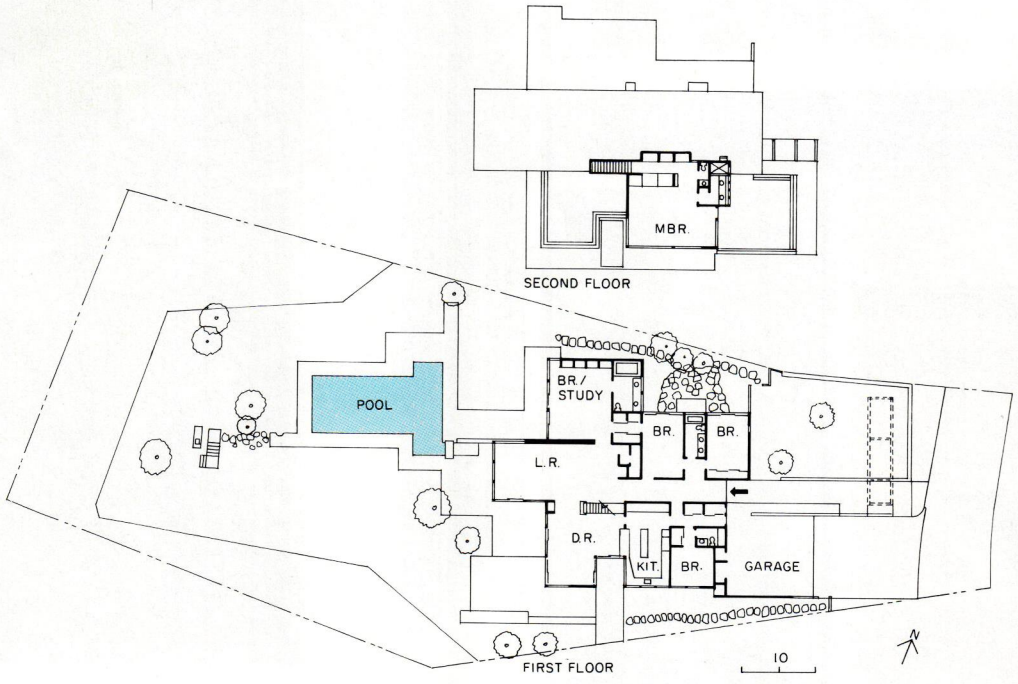
The rectangular forms of the front, which buffer the house from the street, slowly give way as one moves through the house to the serenity of a living area (below left) that opens out to a view of hills and the distant ocean. Sliding panels allow the client to close off the media room (in the background beyond the aluminum fireplace hood), while a similar device also can make the kitchen into a separate room. Sunshades and sliding glass doors then increase the protected, but seemingly limitless boundaries of the house. Only the steel staircase to the master bedroom interrupts this movement (opposite).





The main floor of the original house had a three-part garden facade juxtaposed with a series of closed bedroom forms and intersected by the off-center axis of the entry. An added pool and decks send the old design spinning off in new directions. It sounds like mind games, but the result, says the client "is a world where everything is open. Light comes in, but I still feel as if the house is filled with comfortable nooks."

Credits
House for a Film Producer
Los Angeles, California
Architect: *Smith-Miller + Hawkinson Architects—Henry Smith-Miller and Laurie Hawkinson, partners-in-charge; Knut Hansen, Ruri Yampolsky, Starling Keene, Charles Renfro, Kit Yan, Eric Cobb, Jenifer Stearns, Annette Fierro, and Rob Rothblatt, project team*
Engineers: *Steven Mezey (structural); Carlo Marzot (mechanical); Claude Engle (lighting)*
Landscape Architect: *Achva Benzinberg Stein*
General Contractor: *Mounir Boctor, Monet Contracting*

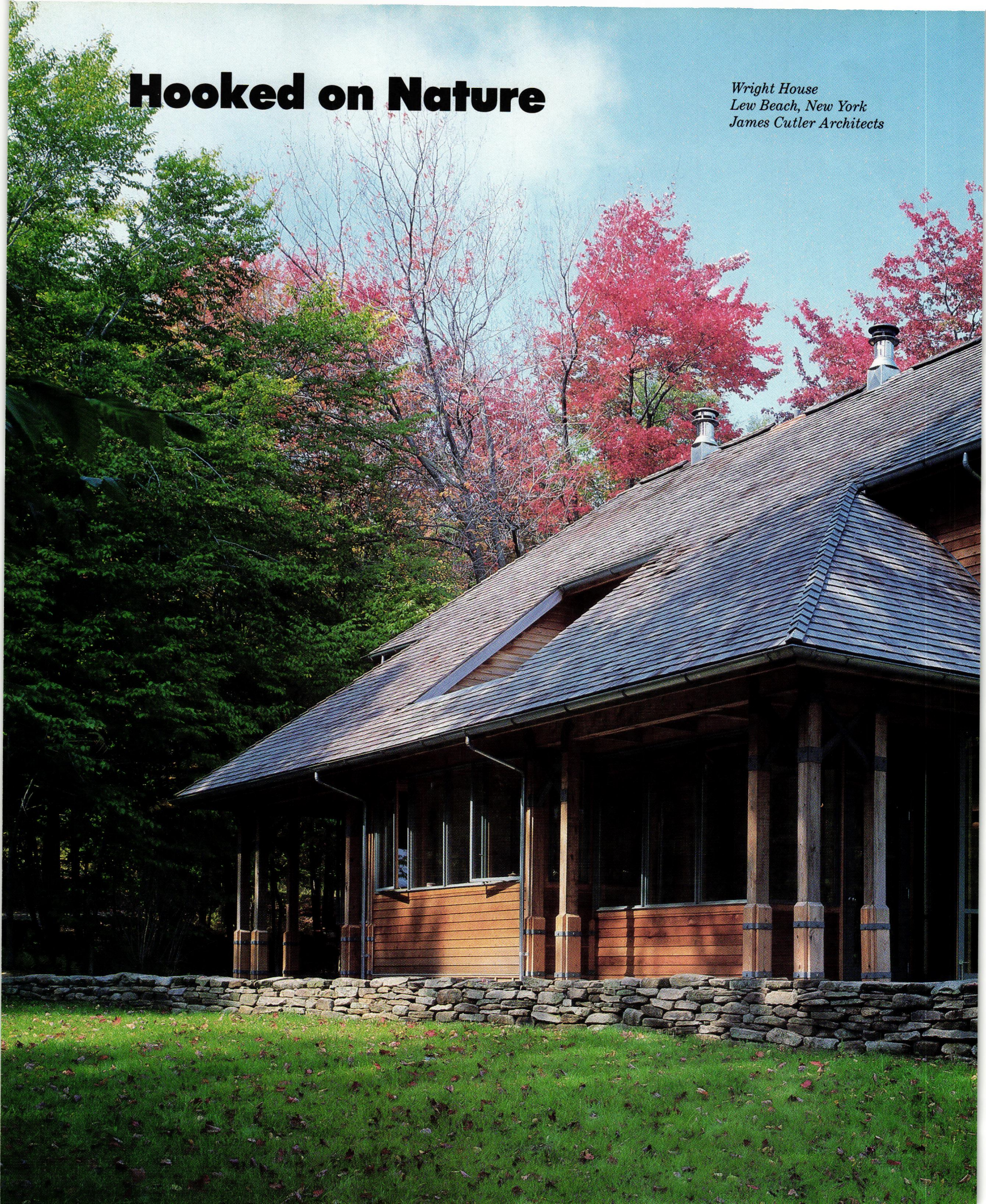






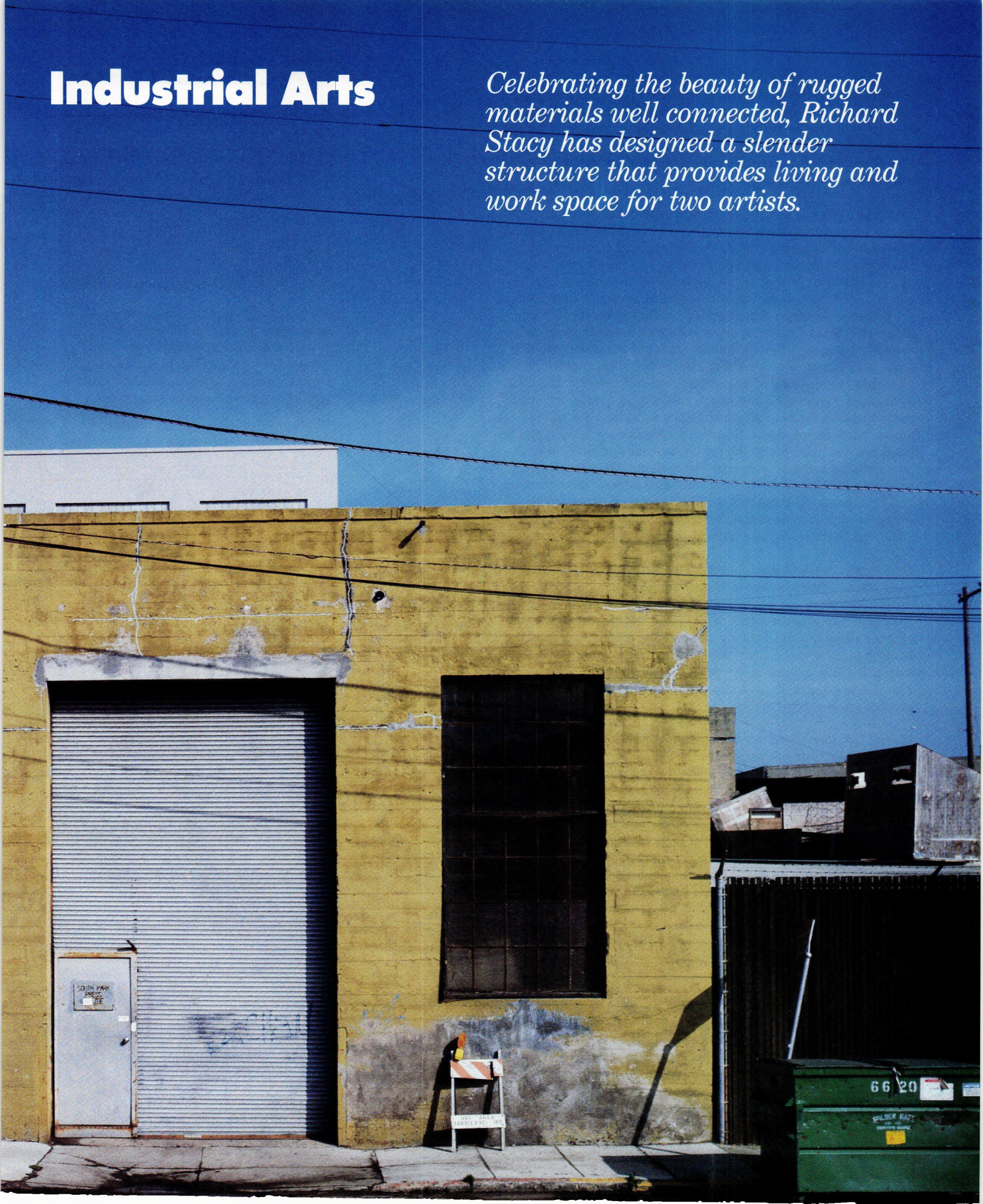
Hooked on Nature

Wright House
Lew Beach, New York
James Cutler Architects



Industrial Arts

Celebrating the beauty of rugged materials well connected, Richard Stacy has designed a slender structure that provides living and work space for two artists.



Inserted on a narrow lot in San Francisco's gritty industrial district south of Market Street, the Corson-Heinser Live/Work Building doesn't pull any punches. It's a straightforward expression of a Modern industrial esthetic, relying on rugged materials and careful assembly to carry the day. No structural pyrotechnics or exaggerated forms here. No expensive finishes or fabulous site to distract attention from the building itself.

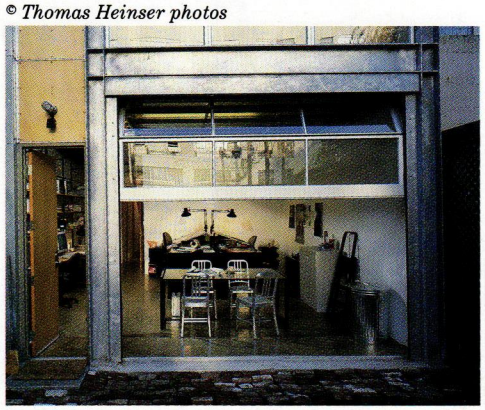
Although sleek and new, the 3,700-square-foot structure maintains the no-nonsense approach found in most of the older warehouse and industrial buildings in the area. Vertical circulation and core facilities such as bathrooms and a dumbwaiter hug the long southern edge of the 20- by 75-foot lot, while the living and work spaces take advantage of views to downtown San Francisco on the north side of the property. Architect Richard Stacy, of Tanner Leddy Maytum Stacy, clearly marks this separation of functions on the east and west elevations, splitting the building into two narrow blocks that seem to slide past each other. Holding the two slices together is a sophisticated composition of inexpensive, low-maintenance materials: light-gauge galvanized sheet metal, steel frame, quarter-inch-thick cement boards, metal-mesh panels, stained marine plywood, and aluminum windows (opposite). How these materials are joined became a passion not only for Stacy, but for his husband-and-wife clients, a photographer and a graphic artist, who often talked screws and washers with him. From the start, the three agreed that materials and joints would be frankly exposed. The result is an architectural collage in which stainless-steel screws and neoprene washers are as important as the interplay of opaque and transparent surfaces.

Structurally, the building is standard wood-frame construction with steel braces at the east and west ends for seismic support. Because the soil is marshy, the house sits on six 40-foot-deep piles and a concrete slab (axonometric right). While metal and glass dominate the exterior elevations, the building's underlying wood frame is exposed in much of the interior. Leaving wall studs and beams open in the stair hall and specifying open risers and metal-grate landings, Stacy was able to bring more light into the space while showing off the raw materials of construction.

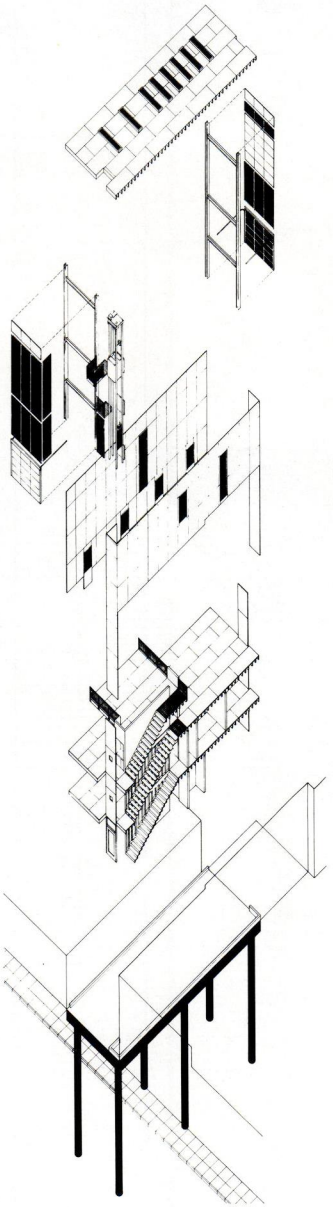
Built in less than seven months for about $95 per square foot, the house maintains its raw esthetic in the living and work areas. "It's basically a shell building," says Stacy, "with few fancy finishes." The first floor, which includes a garage and graphics studio, dispenses with a sheetrock ceiling in favor of exposed pipes and floor joists. To open up the graphics studio and bring in the morning sun, the architect used a commercial-grade garage door with glass panels as the eastern wall. The second floor contains the living areas and makes the most of simple materials: composition-board flooring, frosted-acrylic-plastic sliding panels separating the kitchen from the bedroom, and a wall of standard aluminum windows. A photographer's studio occupies the third floor and mezzanine level, taking advantage of a 16-foot-high space and sunlight coming from four directions (five, if you count the series of long narrow skylights neatly tucked between the rafters).

Already known for its Diamond and Jewelry Mart on Brannan Street in the mid-1980s, Tanner Leddy Maytum Stacy Architects was one of four San Francisco firms featured in an exhibit entitled "In the Spirit of Modernism" at the city's Museum of Modern Art earlier this year. Included in that show, the Corson-Heinser Live-Work Building reveals the firm's skill at breathing new life into 20th-century residential design. *Clifford A. Pearson*

© *Thomas Heinser photos*

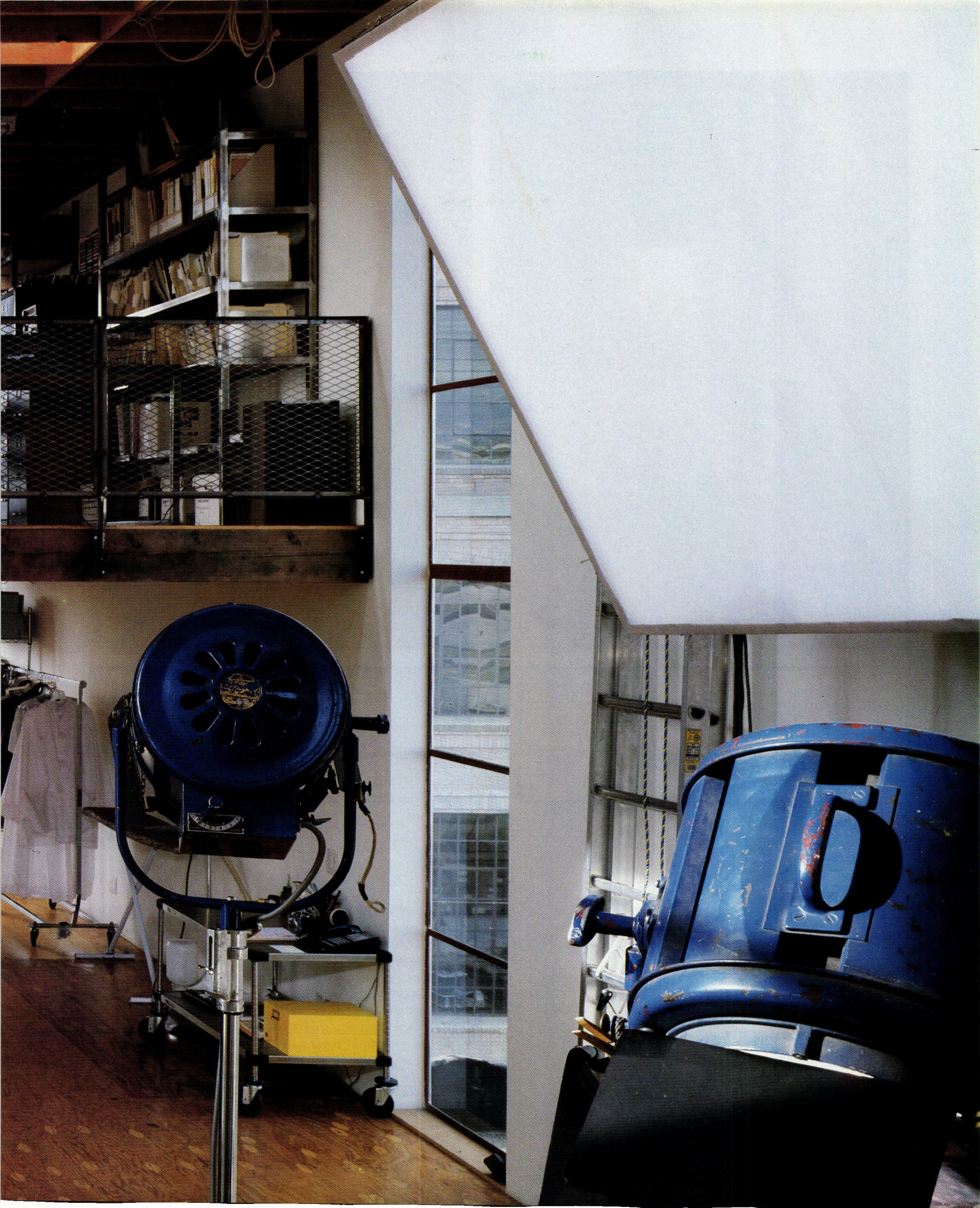


The building is a wood-frame structure with steel seismic braces and is set on 40-foot-deep piles (drawing below). A glass-paneled garage door opens up the graphics studio (above). The front elevation is a collage of industrial materials (opposite).



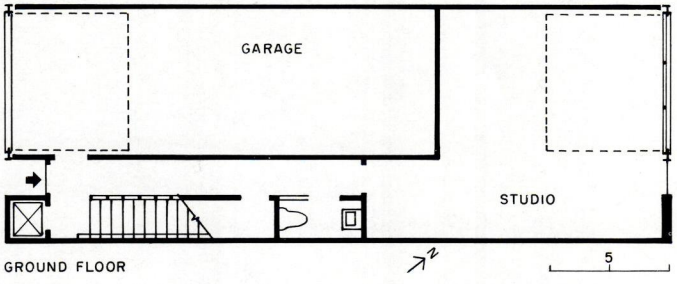




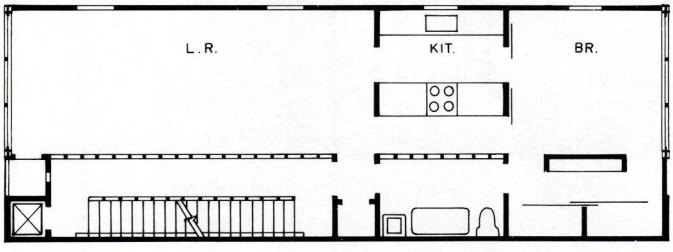






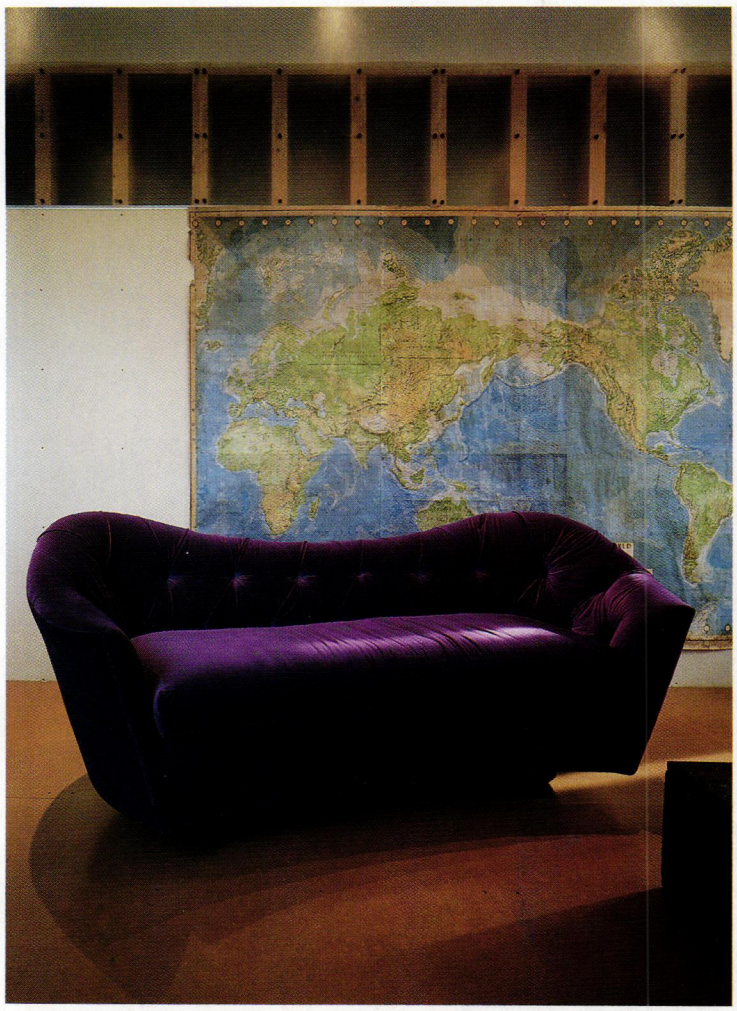


GROUND FLOOR

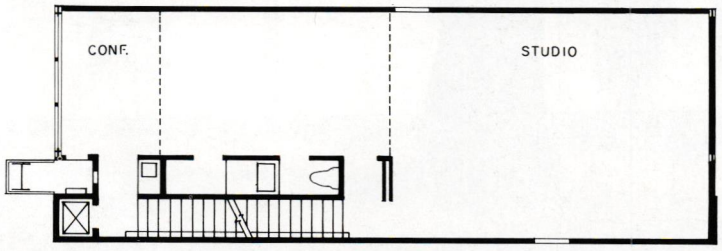


SECOND FLOOR

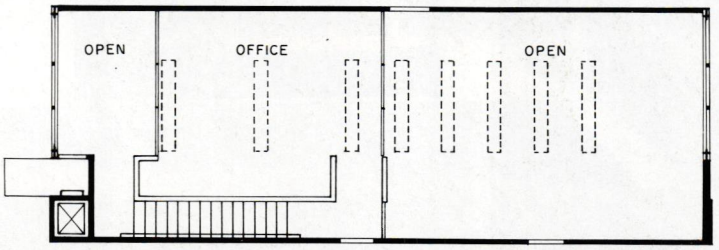
The photography studio (preceding pages) occupies the third floor and mezzanine level, offering 16-foot clearance in the main shooting area. Although backed up against a two-story wall with only a band of clerestory windows, this area can receive sunlight from vertical windows on the north and south ends, the window wall on the western elevation, and narrow lights inserted between the rafters. Because the building is in a downtown fire zone, it is sprinklered. With a footprint of 20 by 55 feet, each floor measures 1,100 square feet. The mezzanine occupies about 340 square feet. To make the building's vertical circulation block feel as open as possible and to show how the structure is put together, the architect exposed wood studs in the stair hall and used open risers (above







THIRD FLOOR



MEZZANINE

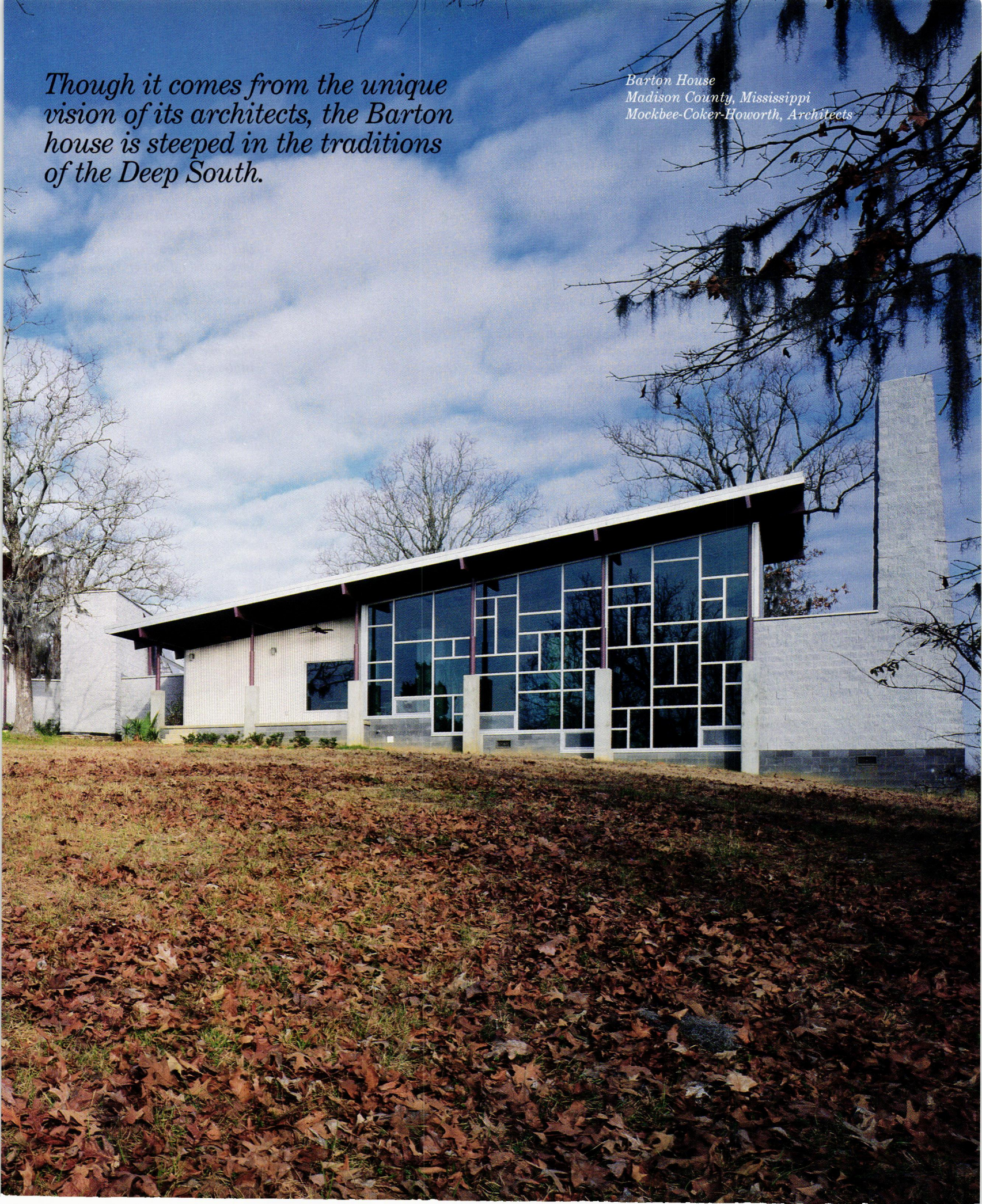
left). The second floor serves as the common living area, with the kitchen (opposite right) separating the living room (above) from the bedroom (not shown). The photo studio (above right) occupies two levels.

Credits
Corson-Heinser Live/Work Building San Francisco, California

Owners: *Madeleine Corson and Thomas Heinser*
Architect: *Tanner Leddy Maytum Stacy Architects—Richard Stacy, Nick Noyes, design team*
Engineers: *Tennebaum-Manheim Engineers (structural); Design Engineering Services (mechanical)*
General Contractor: *Fine European Construction*

Bayou Country Seat





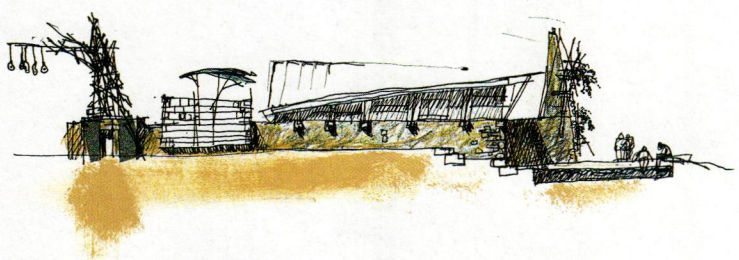
Though it comes from the unique vision of its architects, the Barton house is steeped in the traditions of the Deep South.

Barton House
Madison County, Mississippi
Mockbee-Coker-Howorth, Architects

Clients are scarce in and around Madison County, Mississippi, which seems to have missed the economic boom that transformed other parts of the South. And it takes a special client to seek out the particular vision of Samuel Mockbee and Coleman Coker, whose design approach is hard to categorize. They cannot be labeled regionalists in the standard sense of reworking themes derived from historical forms. Rather, Mockbee's and Coker's accomplishment lies in the way they collage high design with the "vernacular" components of commercial construction. (Take, for example, the Canton Fire Station, an artfully gussied-up metal shed—RECORD, March 1988, pages 116-117.) The firm's growing reputation in and beyond Mississippi led Ken Barton to Mockbee in search of "someone willing to do something different" from the neo-Williamsburg taste that typifies the area and seems as foreign here as a New England saltbox.

The Mississippi delta landscape of barely swelling hills and tupelo- and bald cypress-dotted bottomland is not the sort of dramatic geography that demands a bold response; what's more, there isn't a regionalist tradition to draw upon—unless one views the artifacts of antebellum culture as an appropriate source. The delta has a palpable sense of place, but it is social, the passed-along legacy of close-knit communities that comes when few outsiders move in. As Coker puts it, "The South does not have a strong visual culture. It has always had a much stronger verbal tradition, in literature, in music." The architects' response likewise has a narrative quality. The client, an attorney with a taste for Rolling Stones music and Andy Warhol prints, sought a contemporary house where he could gracefully display a growing art collection. What Coker and Mockbee designed are two 2,200-square-foot pavilions carefully set among mature moss-draped water oaks and nestled into the brow of a hill. The north, entrance side of the house is closed, wall-like, and abstract in form, revealing little of what lies beyond (opposite bottom). This sense of mystery is amplified in the entry, which is a tall masonry block lit only by a high window over the entrance. Two narrow, identical openings lead to either bedroom or living wings. Only as the visitor descends to the living spaces does the house open out to expansive views of tree-covered ridges punctuated by farm fields.

The house is unpredictable in its forms, materials, and details. The aluminized-steel cladding panels, concrete-block walls, and a fretwork of structural-steel supports evoke the agricultural-industrial structures that are the primary "architectural" context of the area. These materials visually peel off at the pavilion's extremities, revealing the '50s highway-strip ambiance of the swooping floating roofs and random-ashlar grid of the living-room storefront glazing. The notions that formed the house are not merely esthetic, however. Roof overhangs are calibrated to protect living spaces from the strongest sun while the orientation of the pavilions takes advantage of views. Abundant groundwater serves a heat pump which further lowers both cooling and heating costs. *James S. Russell*



An early sketch for the Barton house (bottom) contains the seeds of the built design: a pavilion with a sweeping roof flanked by a solid masonry volume (entrance elevation bottom opposite). Native vegetation and "bottle trees" inspired trellislike elements. (The colored-glass "leaves" of the latter, according to local lore, ward off evil spirits.) The glazing at the end wall (top) draws the visitor from the shadowed entrance toward the sunlit living room and an attached masonry-enclosed inglenook.

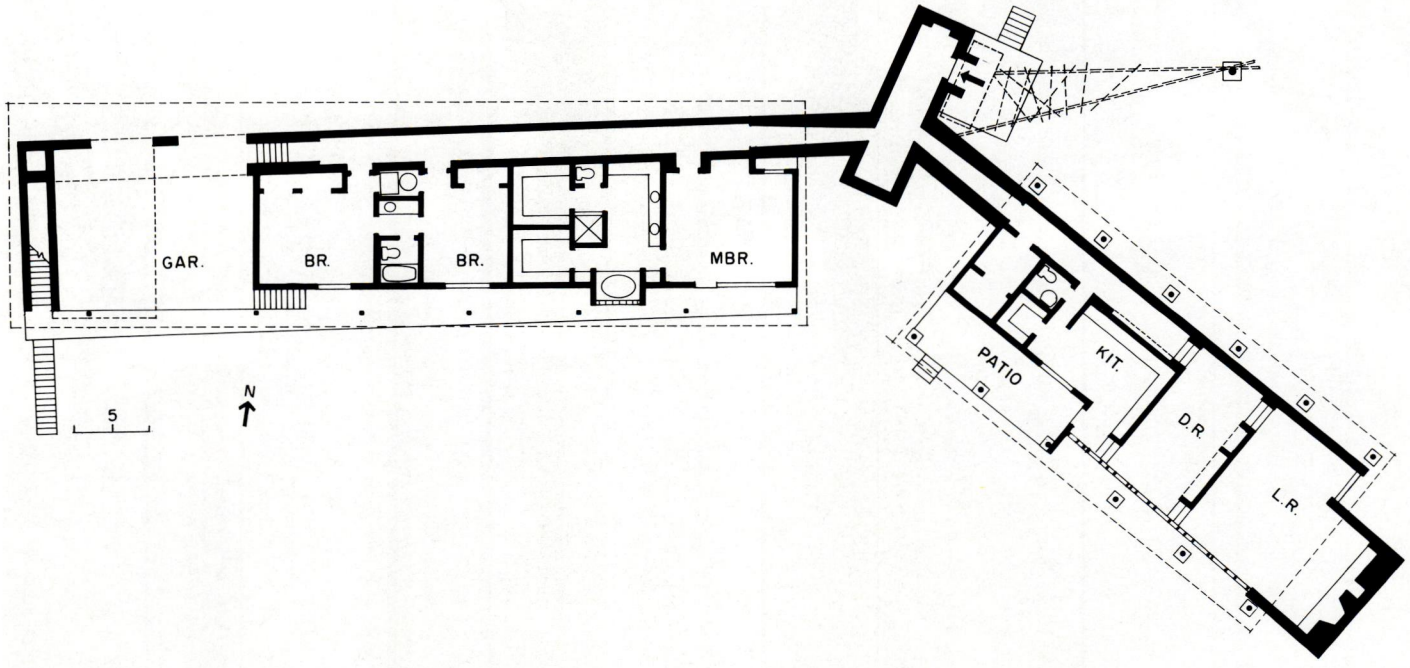
© *Timothy Hursley photos*







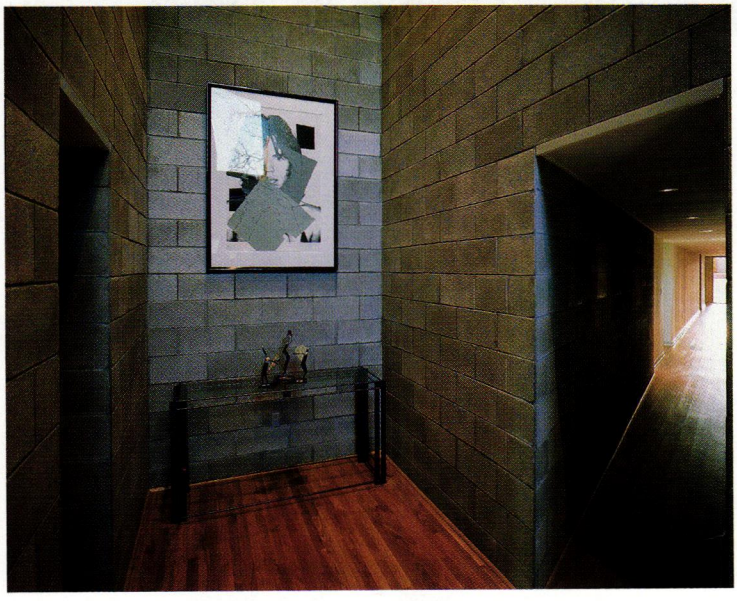
Over the living wing, the roof soars to the east (left and pages 132-133) and is supported by a row of steel columns on high concrete piers. The roof slopes to the south over the bedroom wing and is propped up by a fretwork of tubular steel struts. (You could call the color primer purple.) A narrow stair rises to a screened porch suspended within the carport, suitably placed for sunset viewing (opposite). The apparent simplicity of the plan (below) belies the rich itinerary by which the house is experienced. (A triangular metal framework at the entrance was not built.) The visitor enters a vertical mass enclosed by split-faced block and lit only by a high window (page 138). From here, movement is to the right through a narrow, dark passage opening to a long gallery and bedrooms. To the left, a similar corridor gradually widens and opens upward (the ceiling sweeps up, the corridor steps down) to the light-filled, glazed dining and living areas, revealing views across the landscape.











The straightforward enclosure of the Barton house only suggests the variety in the handling of light within. The entrance (bottom left) and living-room inglenook (top left) are intimate, even cozy. Steel roof supports add an outer light-filtering layer to the screened porch (middle). A patterned-grid window wall casts everchanging shadows on living-room walls (opposite).

Credits
Barton House
Madison County, Mississippi
Owner: *Ken Barton*
Architect: *Mockbee-Coker-Howorth Architects—Samuel Mockbee, partner-in-charge; Coleman Coker, project architect; Patrick Alexander, Eric Commarato, Farrol D. Hollomon, Jr., Spence Kellum, Daniel Woolridge, project team*
Engineer: *Cameron Till (structural)*
Consultant: *Richard Chandler Griffin & Associates (landscape)*
Contractors: *Benson & Benson Builders; Fletcher Cox (interior woodwork)*



Technology Focus: Building a Temple Drawn from Nature

The small city of Independence, Missouri, has never seen anything like the temple under construction for the Reorganized Church of Jesus Christ of Latter Day Saints. "They asked us to look for a new form," explains Gyo Obata of Hellmuth, Obata & Kassabaum. "That is a wonderful objective for an architect."

What Obata proposed is actually a very old form, based on the elegant geometry of a nautilus shell. The client responded to the universality of the image. "They have missionaries all over the world," explains Obata, "and they didn't want any reference back to other kinds of Christian churches." To have such an idea is one thing, though. "We relied very heavily upon our 3-D computer capabilities to develop and communicate the design," says Robert Stockdale, a senior associate who led the design process for HOK. "Without the computer, I suspect this building would not have been possible, especially given the constraints of time and budget."

Though the temple's form is mathematically rational and instantly comprehensible, it is not made of repetitive assemblies of identical units. Instead, it is described by a single mathematical formula. Beginning at the top of the spire (the zero point), the formula spins the form out and down, determining the radius at any desired location. No element falls on a conventional orthogonal grid and every dimension varies (see detail page 144), even on the vertical surfaces clad in glass and stone. (Photos this page and opposite show progress prior to installation of a shop-fabricated steeple [drawing].) Conventional strings of dimensions were useless. The architect's challenge, then, was not only to generate the form, but to support it and communicate the configuration and location of elements to the general contractor and subcontractors.

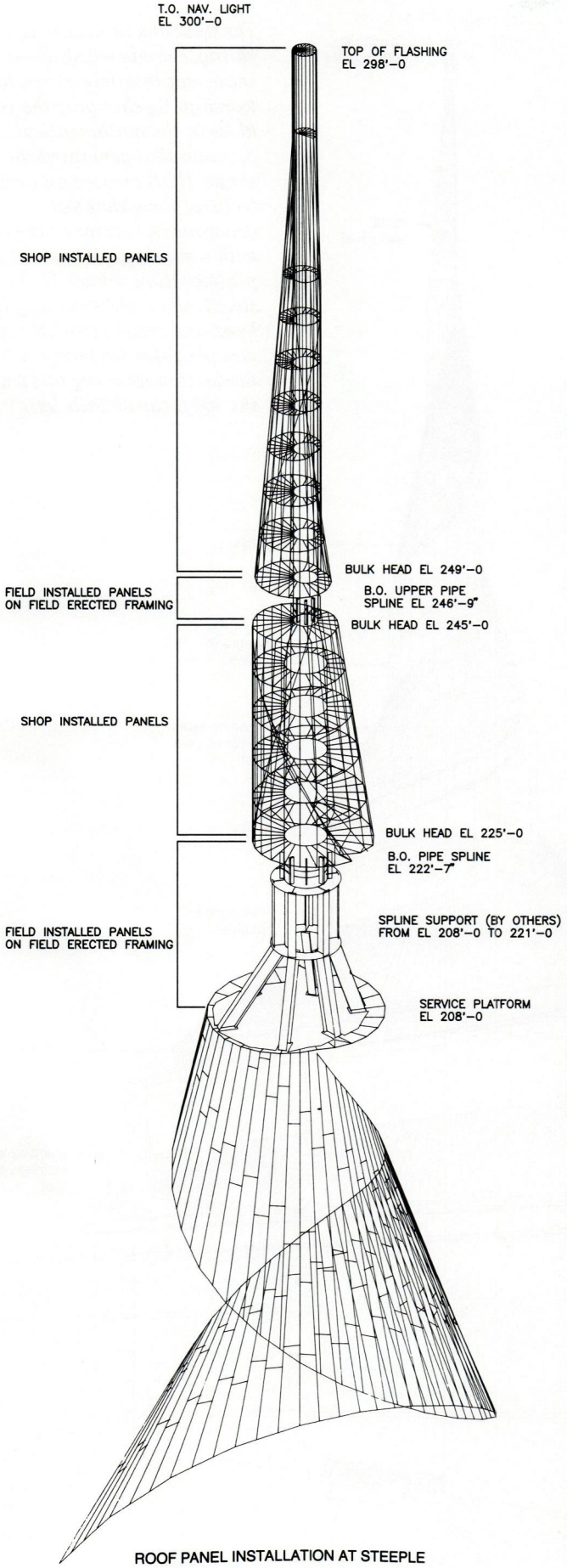
The design did not itself suggest a structural solution. James Atkins, HOK's director of structural engineering, compared several schemes (in consultation with William LeMessurier, of Cambridge, Massachusetts), including one in concrete, which was rejected due to the cost of formwork. Recognizing that the curving form would have to be achieved with facets, the team devised a system of vertical steel bents at each facet, most of which run continuously from the foundation to a 208-ft-high service platform at the base of the steeple. "This is the most difficult-to-analyze building we have ever done," concludes Atkins. Since the structure was not self-supporting during erection (it's tied together at the service platform), the team worked closely with subcontractors to select from erection schemes that included cantilevering beams, internal or external shoring-tower arrangements, and—the alternative chosen—a central shoring tower that saved money because it doubled as a scaffolding for completing the interior.

The project required a different means of working with subcontractors. The A. Zahner Sheet Metal Company, which fabricated the standing-seam stainless-steel roof, was involved early. "We'd rather be involved before bidding to make sure the details work," comments president William Zahner. The company installed CAD capability for the project and used DXF-format files to generate cutting patterns for each panel from elevations "uncoiled" by the A/E's CAD software. With liability concerns always looming, many architects are reluctant to share such detailed information for fear that fabricators will make improper assumptions about the completeness of the design and blame the architect if the parts don't fit. In this case, though, Zahner checked CAD-generated control points against field conditions and found a close match.

The architect's approach, explains Stockdale, "was to give [contractors] the methodology. They would have to go in and derive the particulars." Zahner adds, "We couldn't have built the pieces from the level of detail the architects provided. But our work would have taken much longer if we hadn't had access to HOK's CAD files. And there would have been a level of accuracy lost." *James S. Russell*



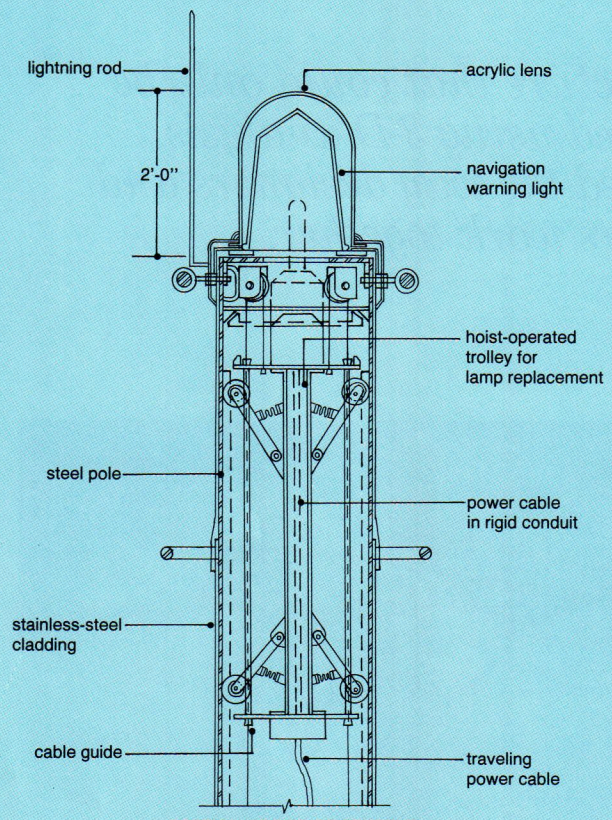
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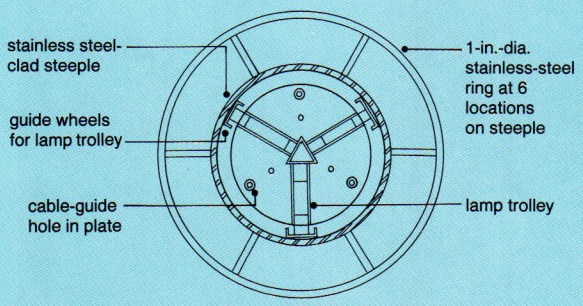
ROOF PANEL INSTALLATION AT STEEPLE

A structure that could only be designed using 3-D analysis changed the way designers and builders work together.





SECTION AT TOP OF STEEPLE

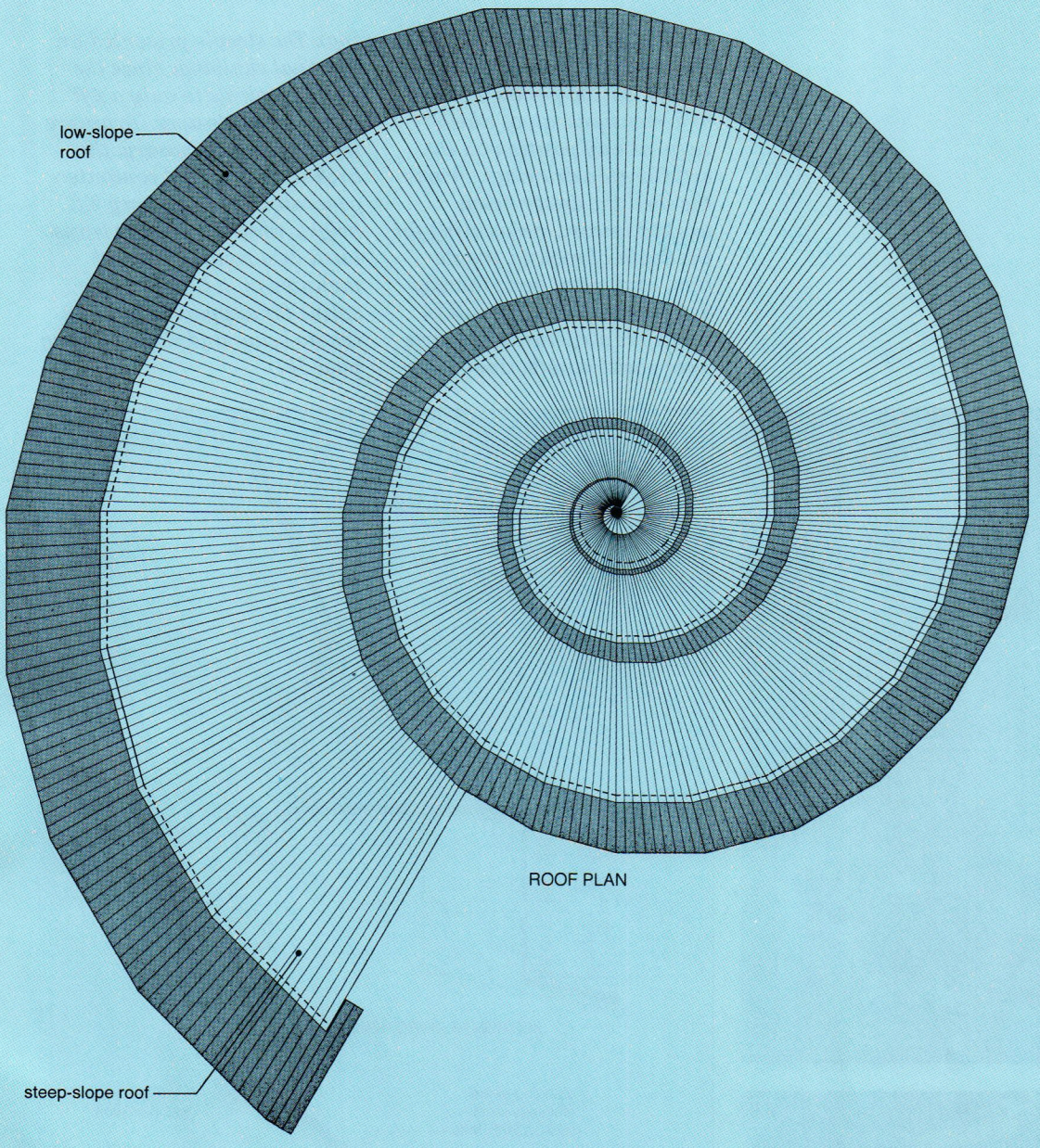


PLAN AT TOP OF STEEPLE

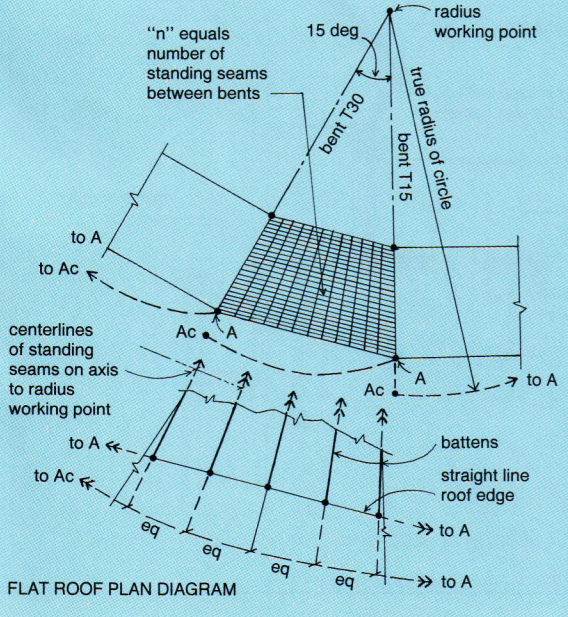
The nautilus in nature is a spiraling, chambered shell—a shape not innately suited to worship. By changing the variables in the mathematical formula that generated the shape, HOK created an architectural form that was generous in volume at the base, with a soaring, attenuated steeple (elevation below). Within the steeple the architects designed a hoist and trolley from the service platform to change a navigation warning lamp at the 300-ft top (details left).

NORTH ELEVATION

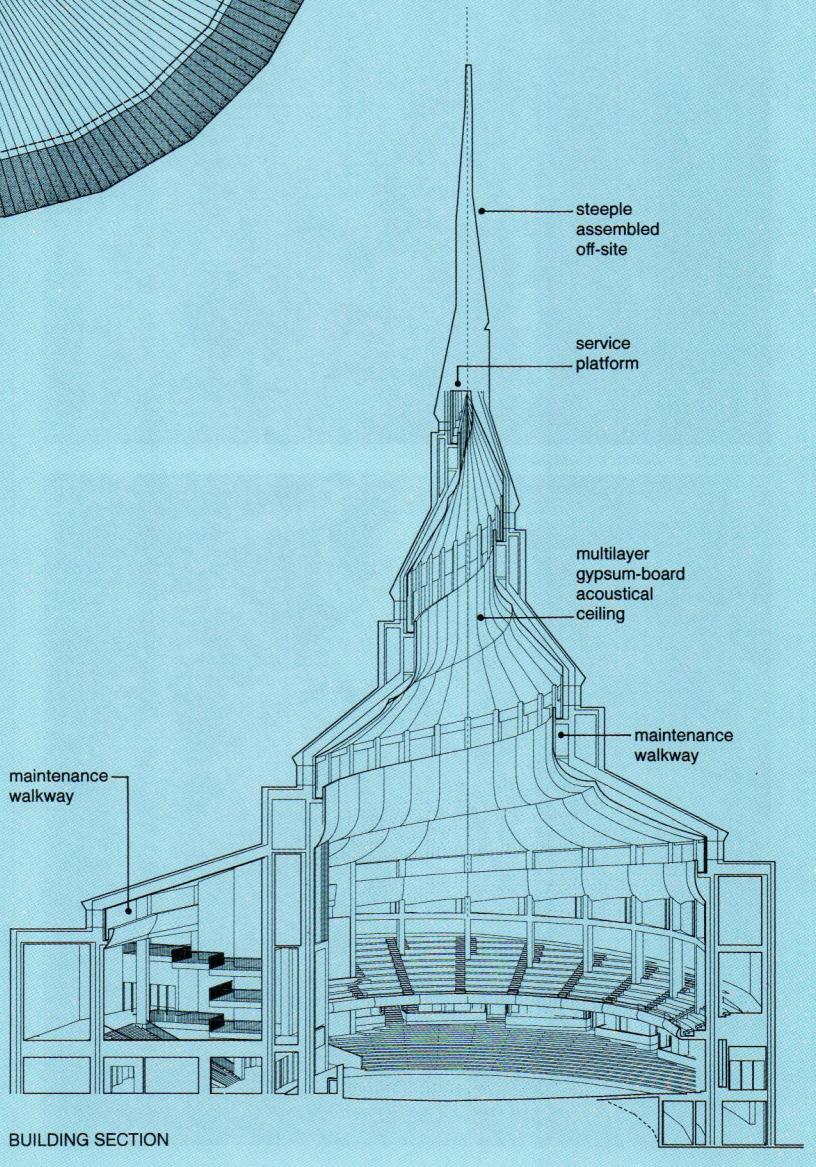
A computer generated the roof plan (left) but contractors also worked from a matrix of exterior work points and a series of diagrams (one example, bottom left) to determine actual piece dimensions. The A/E sliced the three-dimensional computer model of the design into 24 building cross-sections, one for each 15 deg of rotation. Into this they fit structural members, mechanical systems, finishes, and a service catwalk that spirals up from the sanctuary (section below).



ROOF PLAN

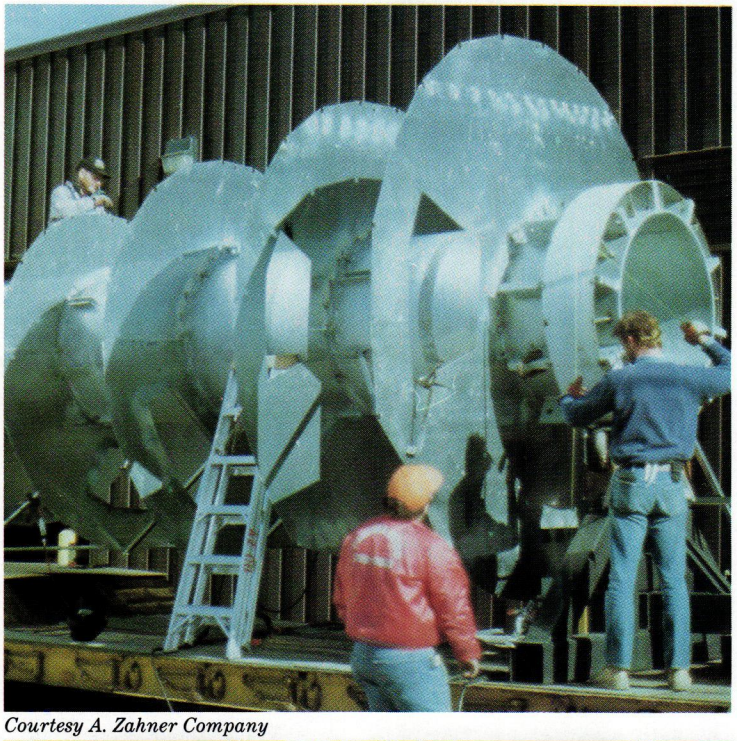


FLAT ROOF PLAN DIAGRAM



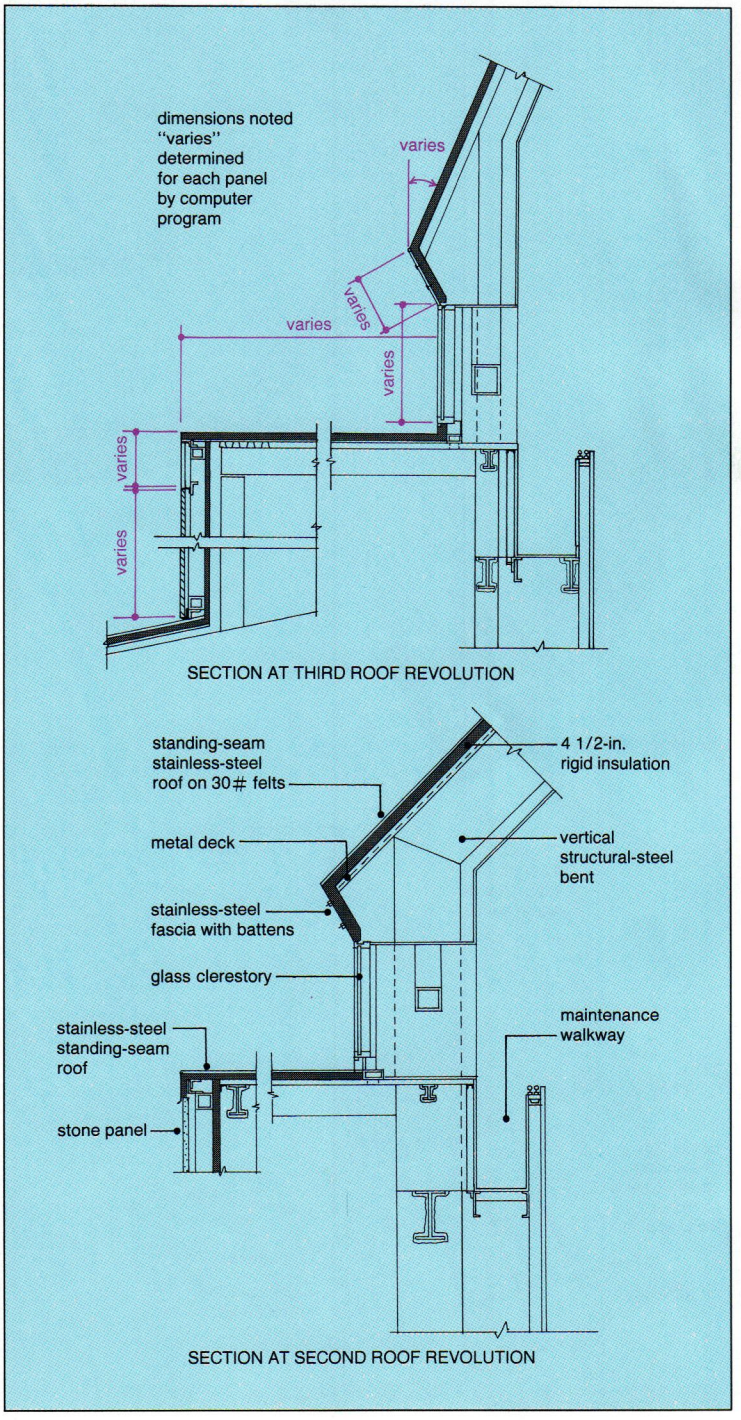
BUILDING SECTION

CAD software developed a three-dimensional external shell, locating points (instead of dimensions, all of which vary) at any position on the exterior (top drawing). From the shell the design team worked inward, accounting for the depth of roofing, insulation, and metal deck, thereby defining the envelope within which the structural supports were positioned (bottom drawing). The steeple presented an unusual challenge since the surface spirals to only a 2-ft diameter at its apex. To assure the precision necessary, the architects provided computer-generated plans at every 2-ft height, which A. Zahner translated into metal discs and mounted on a tubular-pipe spline for support of the skin (photo below and shop drawing page 141).

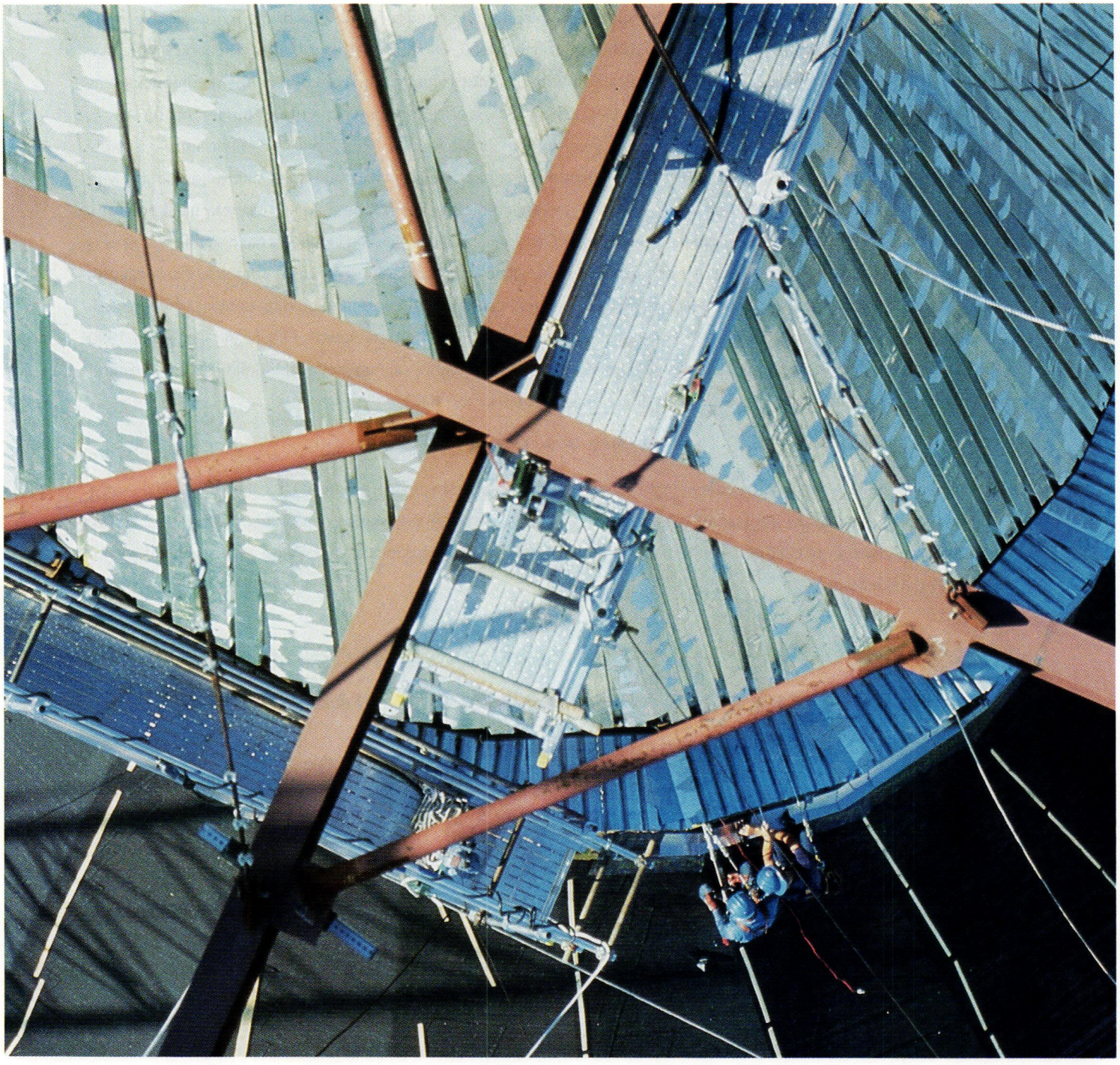


Courtesy A. Zahner Company





Credits
Reorganized Church of Jesus Christ of Latter Day Saints Temple Independence, Missouri
Owner: *Reorganized Church of Jesus Christ of Latter Day Saints*
Architect: *Hellmuth, Obata & Kassabaum—Gyo Obata, design principal; Robert Stockdale, project designer; Charles Hook, project manager; Richard Tell, project architect*
Engineers: *HOK (structural); Smith & Boucher (mechanical)*
Consultants: *Code Consultants, Inc. (codes); LeMessurier Consultants (structural); Heitmann and Associates (exterior skin); Kirkegaard and Associates (acoustical)*
General Contractor: *J. E. Dunn Construction Company*



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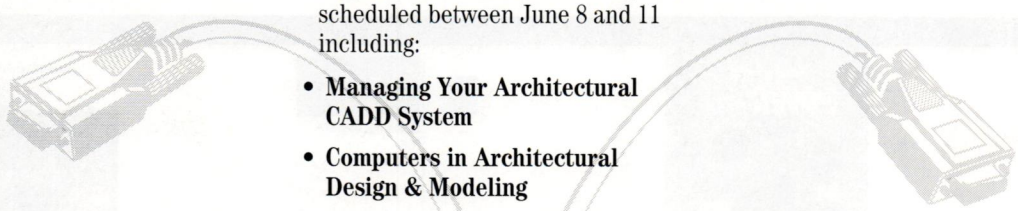
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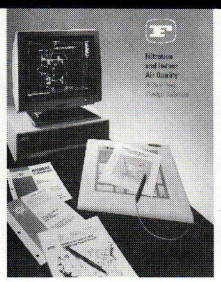
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Product Literature / HVAC

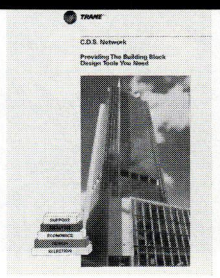
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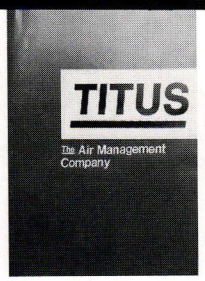
410. Workstation hvac
A brochure discusses Crystal-Aire Clean Air System product options for desktop, wall-mount, ceiling, and hidden installation in office space. Modular design permits electrostatic, HEPA, mechanical, or charcoal filtration; air cleaners can be adapted to any room configuration. United Air Specialists, Inc. Cincinnati.



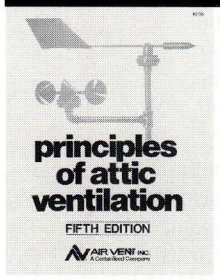
411. Filter selection
A 40-page report, written for system designers, provides an engineering basis for selecting filters for air-quality control in all types of buildings. Correct filtration permits greater use of recirculation air to achieve quality at 100 percent of outdoor air levels. Farr Co., El Segundo, Calif.



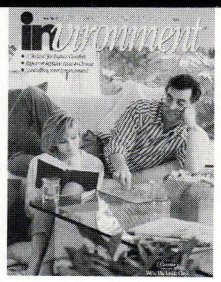
412. Energy analysis
TRACE PC-based programs permit a wide variety of design what-ifs, examining the energy impact of decisions from geographic siting to the thickness of insulating glass. New software integrates AutoCAD with load-design and energy-analysis programs. The Trane Co., La Crosse, Wis.



413. Air distribution
An easy-reference catalog consolidates data on all of this maker's air-distribution products, and offers an overview of current research in air-side applications, including acoustic and energy information. Titus, Richardson, Tex.



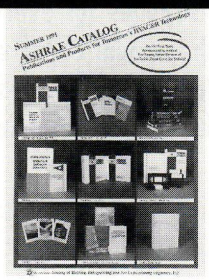
414. Attic ventilation
A 30-page illustrated booklet analyzes the natural forces affecting an attic ventilation system, and compares the performance of different venting techniques in reducing condensation, heat buildup, and ice dams. Describes different ridge-venting installations for various types of roof constructions. Air Vent, Inc., Peoria Heights, Ill.



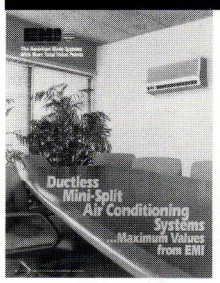
415. Residential hvac
Clearly written 20-page brochure explains the operating principles, energy costs, and air-quality values of heat pumps, air cleaners, humidifiers, programmable thermostats, and other iNvironment System home heating and ventilating equipment. Carrier Corp., Syracuse, N. Y.



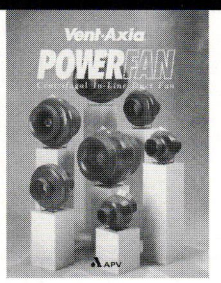
416. Multi-port fans
CVS Series centrifugal exhaust units come in four sizes and up to four venting points to provide energy-efficient air circulation for homes and commercial spaces. Permits complete home ventilation with one fan. Fantech, Inc., Sarasota, Fla.



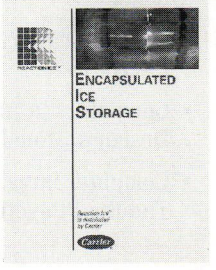
417. Hvac research
Publications catalog summarizes books, manuals, and research documents for the mechanical engineer, architect, and other building professionals. New listings include a guide to the design of quiet hvac systems, with solutions for existing noise problems. American Society of Heating, Refrigerating, and Air-Conditioning Engineers, Inc., Atlanta.



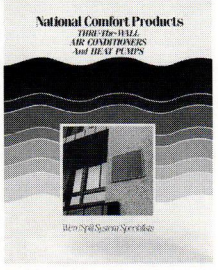
418. Ductless systems
New equipment designs allow for flexible system configuration, especially in the placement of indoor units, and permit the use of ductless mini split air conditioners and heat-pumps for both commercial and residential buildings, particularly in remodeling. EMI, Rome, N. Y.



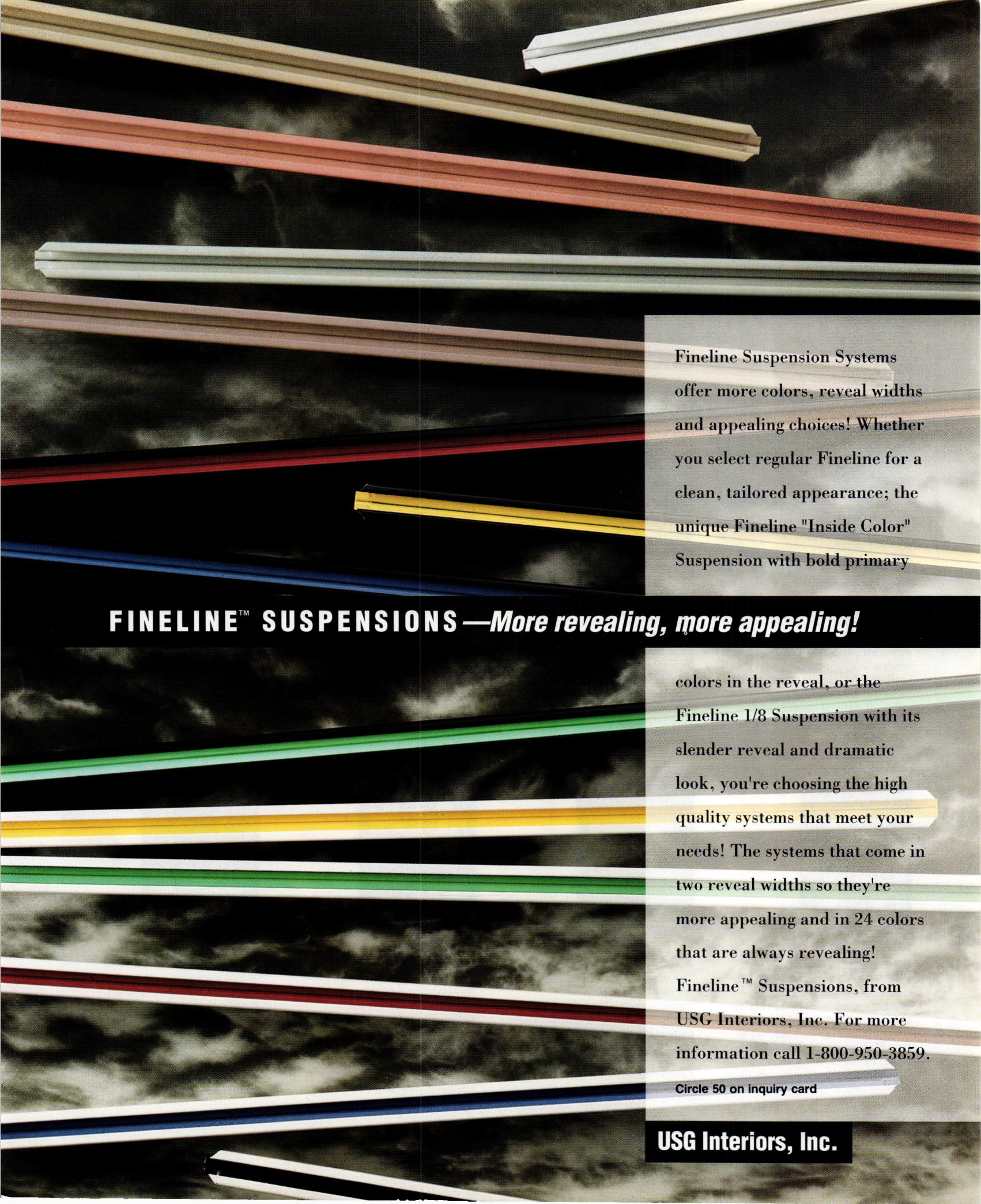
419. In-line duct fan
A compact air mover, the Powerfan combines the benefits of axial-flow units with the pressure characteristics of radial fans. Brochure describes low-noise and easy-installation features of fans for home and commercial ventilation. APV Vent-Axia, Inc., Wilmington, Mass.



420. Ice storage
Brochure explains the advantages claimed for the Reaction Ice encapsulated ice storage system, such as simple installation techniques and superior heat transfer. This air-conditioning technology shifts major electrical consumption to lower-cost evening hours. Carrier Corp., Liverpool, N. Y.



421. Split system
A data sheet on through-the-wall air conditioners and heat pumps gives full unit dimensions, capacity ratings, and electrical requirements for three lines, and lists the equipment brands they can replace. National Comfort Products, King of Prussia, Pa. ■



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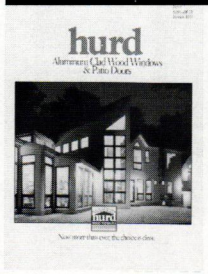
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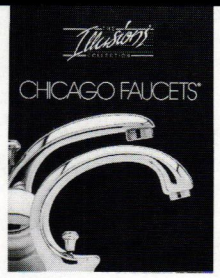
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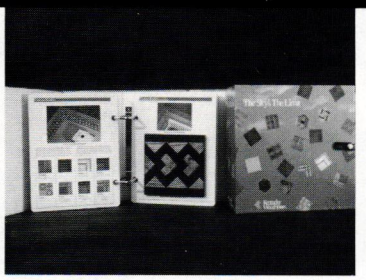
422. Efficient windows
Concise design catalog highlights wood-frame residential windows with glazing options that include InSol-8. This configuration uses two sheets of Heat Mirror film to achieve a total-unit R value of 5.5. CAD window program and architectural tracing file available. Hurd Millwork Co., Inc., Medford, Wis.



423. Euro-style faucets
Illusions bath fittings shown in a color brochure come in a deep gold-colored Eurobrass finish, as well as offering chrome and white-enamel options. Line is characterized by a high-profile spout and rounded faucet handles. The Chicago Faucet Co., Des Plaines, Ill.



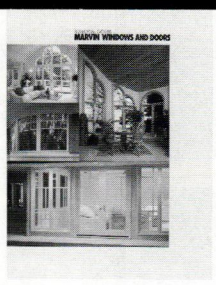
424. Roofing tile
Flat, "S", and Mission-style tiles come in 12 standard russet colors and blends as well as dramatic blues and celadons. Technical catalog includes drawings of flashing, hip, eave, and other installation details. United States Tile Co., Corona, Calif.



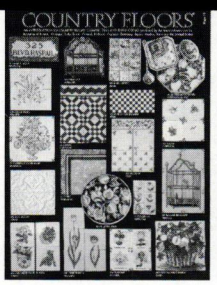
425. Wood-floor design
The Architectural Folder III has hardwood samples and color installation photography of all Kentucky floor patterns, such as Custom Classics, Plank, and Parquet. Includes data on relative hardness and fire-resistance of wood species, millwork accessories, and layout services. Kentucky Wood Floors, Louisville.



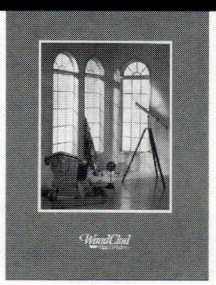
426. Cedar-like siding
Full-scale siding sections are included in a specifier's kit demonstrating new Lake Forest Exteriors, a Kynar-finished vinyl product said to replicate the texture, grain appearance, and subtle colorations of natural cedar siding. Alcoa Building Products, Sidney, Ohio.



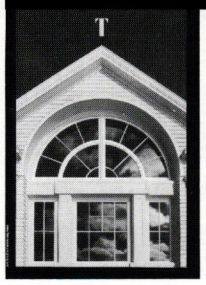
427. Openings
A color Made To Order catalog features 96 pages of wood windows and patio doors in a wide range of shapes to illustrate this maker's custom capabilities. Installation details, frame components, and cladding options are included. Marvin Windows, Warrod, Minn.



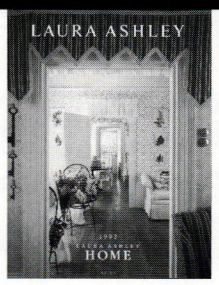
428. Decorative tile. Walls, floors, and counters are shown covered with colorful tiles and terra cottas from France, Portugal, Italy, Holland, Mexico, and other countries, as well as handpainted American-made Culinarios, panels, and border treatments. Country Floors, New York City.



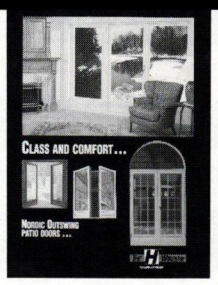
429. Dual-component
An eight-page catalog highlights the WoodClad window frame, which has vertical-grain Douglas fir on the interior, and an exterior structural aluminum frame. Locking hardware on all units meets stringent forced-entry standards. Milgard Windows, Tacoma, Wash.



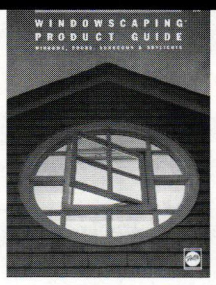
430. Architectural
Tischler's newest application brochure illustrates how custom windows work with residential design in a wide range of idioms, from Baroque through Art Noveau to Post Modern; from Colonial and Tudor to Frank O. Gehry. Tischler und Sohn (USA) Ltd., Greenwich, Conn.



431. Floral fabrics
The versatility of the English Country look is exemplified in wallcoverings, draperies, borders, and furnishings illustrated in a 56-page spring 1992 catalog, which inaugurates this manufacturer's to-the-trade discount sales program. Laura Ashley, Inc., Mahwah, N. J.



432. Rotating window
Brochure describes some of the functional and energy-efficient features of the wood-framed H-Window, a Norwegian design now manufactured in this country. Any rectangular window can flip 180 deg—inside out—for easier cleaning; push-bar operating hardware is available. The H Window Co., Monticello, Minn.

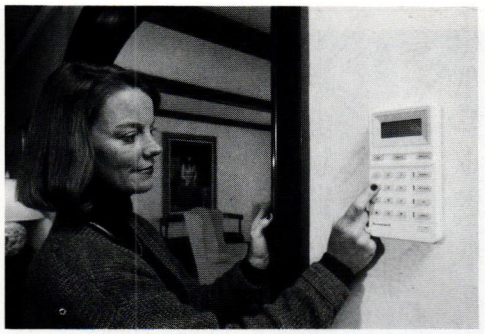


433. Window selection
Windowscaping, a 34-page product guide, uses photos, cutaway drawings, and charts to demonstrate the appearance and design features of wood windows, entrance doors, sliding and French doors, sunrooms, skylights, and folding partitions. Pella/Rolscreen Co., Pella, Iowa.
Continued on page 152

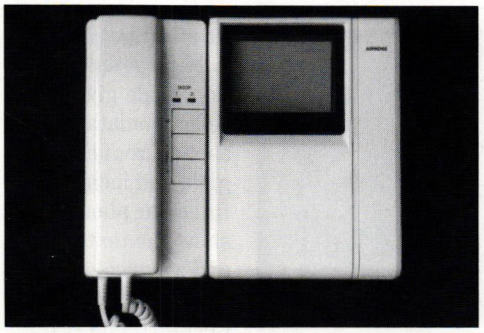
For more information, circle item numbers on Reader Service Cards.



312. Open and shut. At NAHB, Marvin offered a look at the world's first two-way remote for windows. The hand-held unit can open, close, and lock motorized-crank casement windows; windows can also be operated by a push-button on the crank housing or from a wall panel. Any equipped window in a home can be worked from one spot; the location and mode (how much the window is open, locked, etc.) is displayed on a screen. The system should be widely available next year, and will have special value for disabled persons. Marvin Windows, Warroad, Minn.



313. In charge. Another NAHB introduction was the TotalHome system from Honeywell, equipment described as an economical and easy-to-use alternative to complicated home-automation technologies. Through a single control panel, pictured, the system can secure and monitor doors and windows, warn of fire and smoke, control temperature, operate lights, and start electric appliances. These functions are combined in a preset mode (wake up or at work, for example), and can operate remotely by telephone. Combining wired and cordless devices, TotalHome can be installed unobtrusively into an existing home at about $4,000 for a basic system.
Honeywell, Inc., Minneapolis.

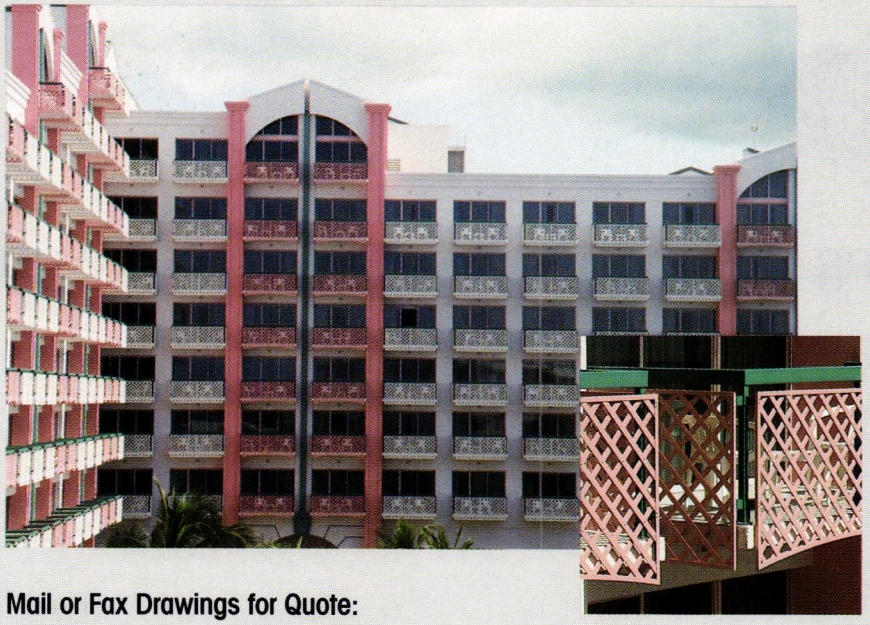


314. Entrance security. The makers of the Video Sentry unit describe it as a doorbell with eyes and ears—and its CCD camera has better-than-human vision. The basic home system consists of a master station, pictured, that can be wall-mounted or placed level on a counter, with a flat-screen display of images from the low-profile entry monitor. Installation requires only two noncoaxial wires. An optional pan-and-tilt feature permits wide-angle viewing through the infrared LED-illuminated camera. Aiphone, Bellevue, Wash.

Continued on page 154

CUSTOM VINYL AND ALUMINUM LATTICE PANEL SYSTEMS

Maintenance free • Easy to install • Never need painting • Last for decades



- Unique systems of PVC or aluminum panels, frames, accessories and railings.
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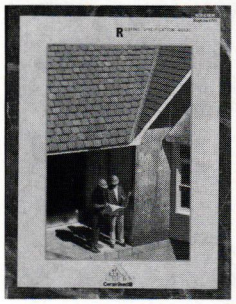
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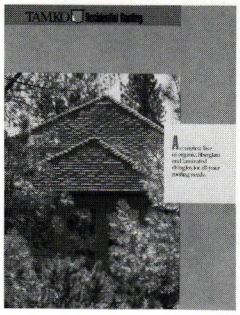
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3174 Marjan Drive Atlanta, Georgia 30340
Phone: 800 521-9878 Fax: 404 457-5125

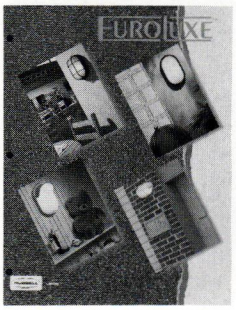
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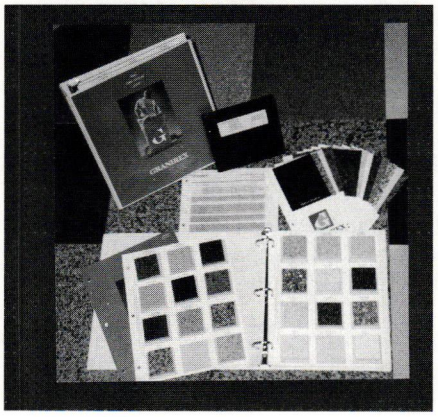
Roofing guide
A 16-page specification guide gives selection data for asphalt roofing shingles, and includes full-color photos that show the texture and a typical application of each product. CertainTeed Corp. **434**



Fiberglass roofing
Product descriptions and installation photographs supplement specification data for fiberglass residential shingles and underlayment roll roofing. Color chart highlights 19 shingle colors. Tamco. **435**



Compact luminaire
Four-color folder gives selection information for Euroluxe decorative indoor-outdoor light fixtures for home use. The compact round or elliptical designs come in a choice of seven colors. Hubbell Lighting. **436**

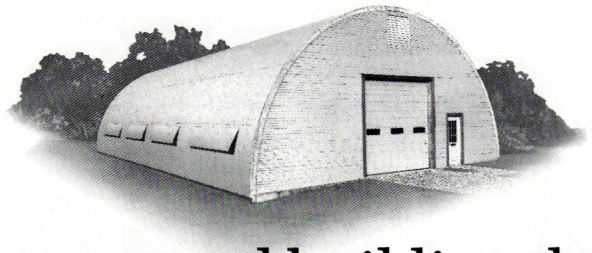


Agglomerate tile
An architectural binder offers specification, installation, and maintenance data for tiles and slabs of agglomerate quartzites and marbles. A full set of samples includes 18 colors and three finish options. Granirex. **437**



1992 Azrock Line Catalog, LC-15 -- Azrock Industries Inc.

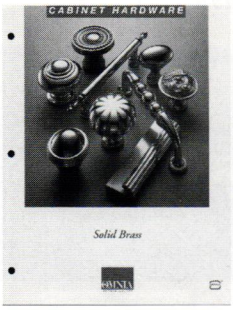
Vinyl floor tile
A 36-page book, "1992 Designs" features full-color illustrations of the firm's vinyl floor tile and accessories. Features custom-floor designs created by special border elements. Azrock. **438**



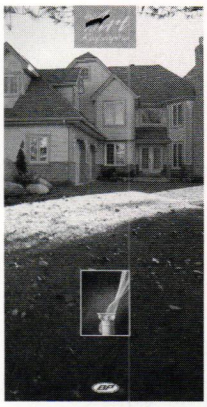
This *was* metal building design.

Times have changed.

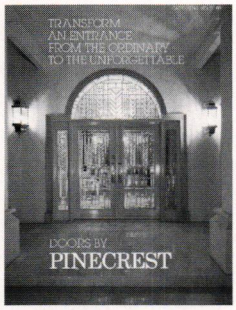
For more information, circle item numbers on Reader Service Cards.



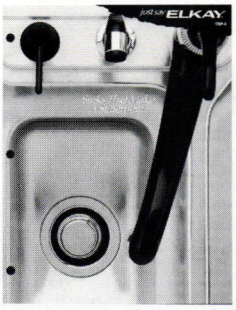
Cabinet hardware
An eight-page brochure provides details on solid-brass cabinet hardware in traditional and contemporary styles. Finish options include black and satin chrome as well as brass shades. Omnia Industries. **439**



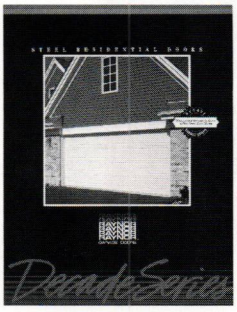
Designer shingles
Selection help for a 20-color line of asphalt and fiberglass roofing shingles includes an unusual color wheel. This matches exterior colors—siding, stone, brick, or stucco—with a suggested roof color. BPCO, Inc. **440**



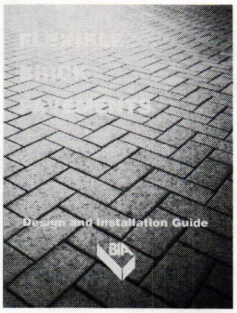
Custom doors
A 113-page four-color catalog illustrates and gives specification guides for a wide range of decorative entry doors, including raised-panel and hand-carved styles in wood, metal, and glass. Pinecrest. **441**



Kitchen sinks
The full line of Elkay stainless steel and Decostone sinks and accessories—from utility to gourmet—for kitchens, bars, and utility areas is covered in a 28-page catalog. Elkay Manufacturing Co. **442**



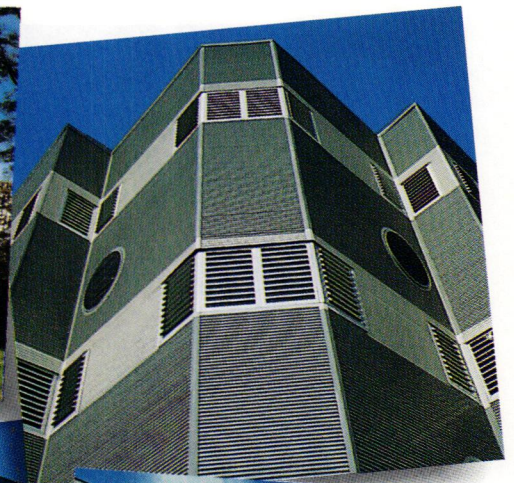
Garage doors
A 12-page brochure describes the Decade series of rough-sawn, finish-painted raised-panel garage doors of 24-gauge steel. Glass-light styles and decorative inserts are also covered. Raynor Garage Doors. **443**

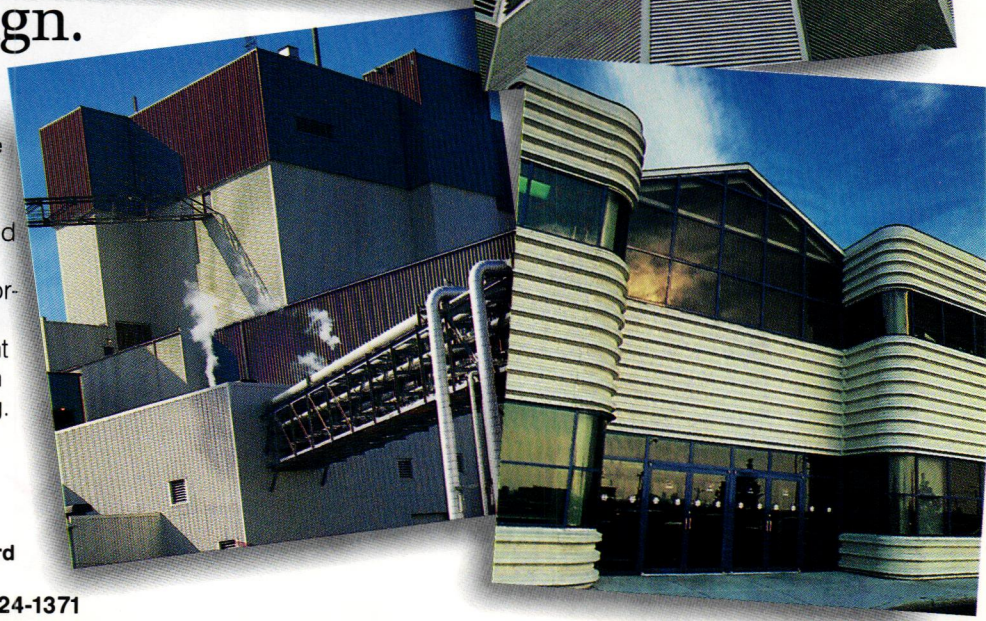


Brick pavement
A comprehensive 26-page guide details the structural design and installation of flexible (sand-jointed) brick paving systems. An interactive computer program is also available ($49.95). Brick Institute of America. **444**

Continued on page 156







So has metal building design.

Steelite roofing and siding panels give architects the freedom to do more with metal—with flexibility, strength, and enduring esthetics far exceeding conventional building products. Steelite is a single source for total building enclosures: panels in an attractive choice of profiles, substrates, coatings and colors... dramatic curved panel systems...the clean, continuous lines and proven superior strength of the unique SRS™ Standing Seam Roof System...streamlined louvers and ventilators...and the corrosion resistance of the exclusive Corrstan® Multi-Mil Coating System. Plus the values added by Steelite's close and constant attention to detail. Find out all you can do with metal panels on your next project. Call or write for our detailed product catalog.

Attention to detail

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Easy money.

Elkay's Gourmet Cuisine Centré makes food preparation easy for your customers while it makes profits easy for you. Our exclusive bi-level design features a recessed ribbed work surface and a convenient disposer bowl, along with a spacious 10"-deep sink bowl. For more sales, just look at Elkay's neat new idea — and say the word...



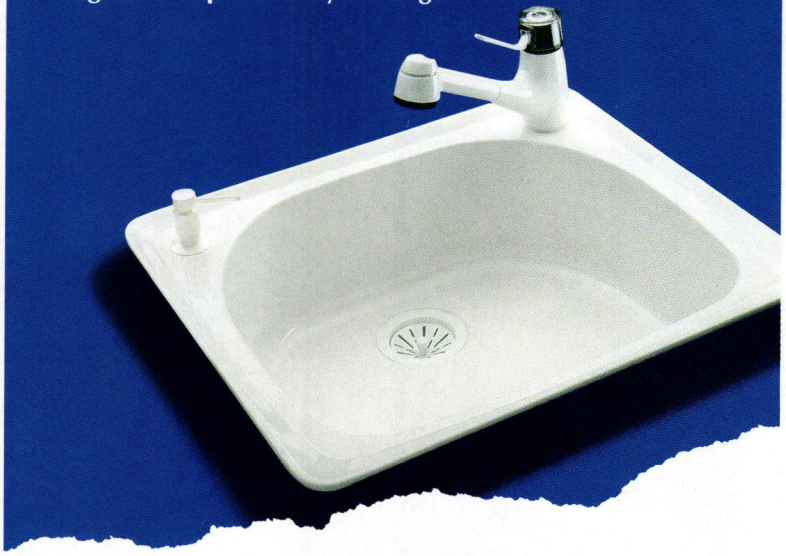
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Make money the new-fashioned way.

Step up to full margins and big profits with Elkay's new single-bowl Sculptura.® Made of high-tech Decostone for strength and durability, Sculptura is the look your customers want. Available in White, Almond, and Granite-look finishes in Gray and Tan. The Sculptura says elegance and profitability in a single word...



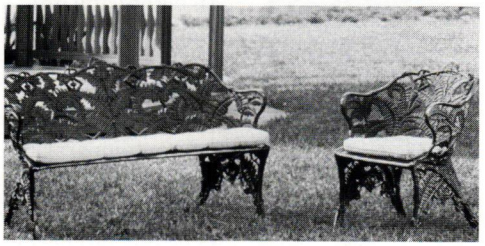
just say ELKAY®

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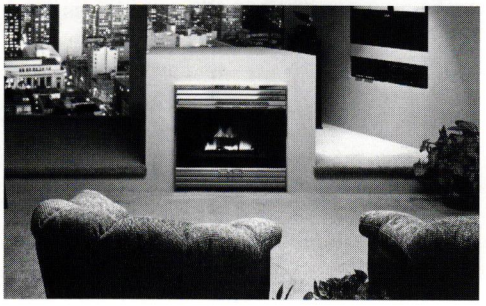
Circle 54 on inquiry card

New Products

continued from page 151



315. Site seating. The Fern Leaf bench and chair are part of a collection of garden furniture reproduced in cast aluminum from 19th century originals at the Smithsonian Institute. Brown Jordan, El Monte, Calif.



316. Anyplace fireplace. The decorative GPV-5000 gas fireplace has a self-contained 3-in. diameter powered-vent system that can be installed in any direction, including around obstructions, over a distance of up to 40 ft, a feature that recommends it for remodeling applications. Superior Fireplace Co., Fullerton, Calif.

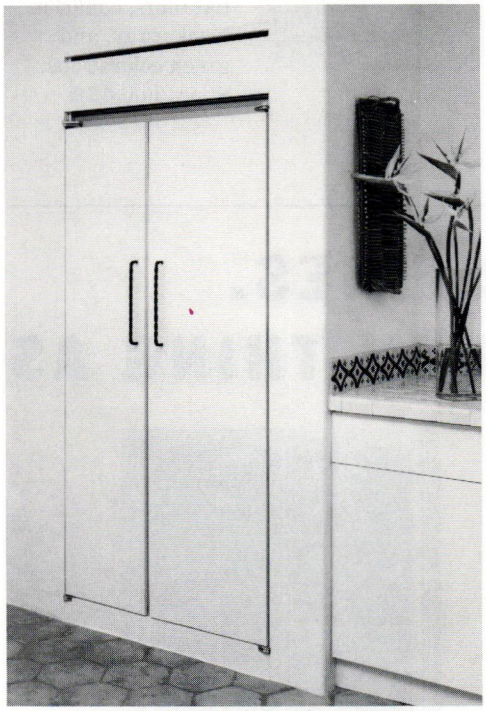


317. Replica roofing. A new roof tile is made of an A-label composite plastic, formed in molds taken directly from natural slate and cedar shakes that produce a distinct, realistic texture. Molds and colorations vary from tile to tile, giving a random effect to the installed roof. Individual tiles interlock for added wind resistance, and take foot traffic without damage. Everest Roofing Products, Walnut, Calif.

For more information, circle item numbers on Reader Service Cards.



318. Formal cabinets. New Regency style creates a traditional look with a raised-panel, one-piece door. Shown in a glossy polyester finish, the kitchen can be ordered in any of 50 colors to match Formica laminate. Wood-Mode, Inc., Kreamer, Pa.

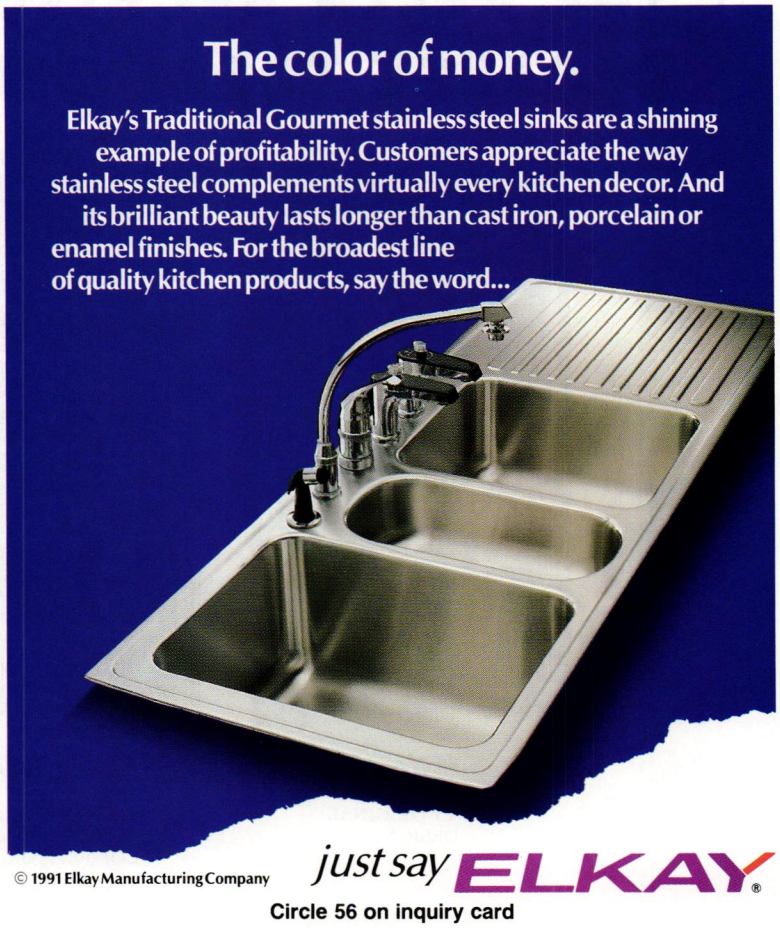


319. Discreet refrigerator. A new customizing feature of the Monogram built-in, 36-in.-wide refrigerator, a door-trim kit lets the unit virtually disappear: even European-thickness panels can be installed perfectly flush with surrounding cabinets without routing, and an adjustable cover conceals the top grille. The standard metal handles may be replaced with custom pulls, such as the twisted iron designs pictured. GE Appliances, Lexington, Ky.

continued on page 158



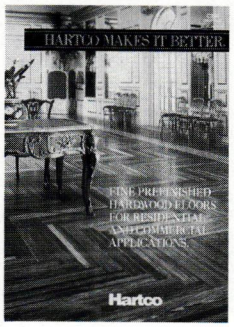
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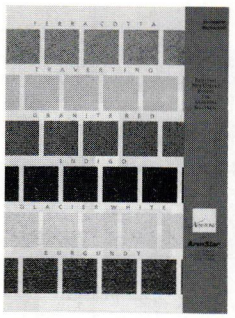
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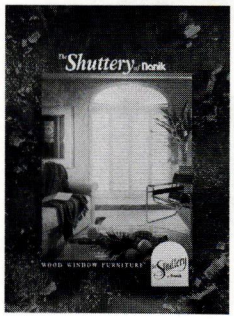
Windows
A 156-page architectural catalog covers residential windows and doors, highlighting new features such as universal sash hardware designed for ease of use, and a wider range of glazing options. Anderson Windows, Inc. **445**



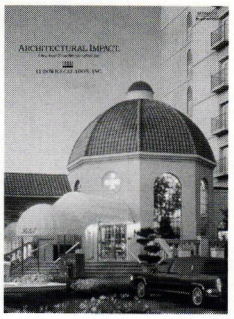
Wood flooring
Hartco offers the specifier a number of new flooring-selection aids, including a colorful applications catalog and a binder set with full-scale samples of all wood-floor patterns. Hartco. **446**



Cast marble
Polished, honed, and textured finishes set off new stone colors of indigo, burgundy, travertine, granite red, and terra cotta floor and wall tiles. For interior use, tiles are now available in 18 standard chip-design colorways. ArmStar. **447**



Hardwood shutters
Framed and unframed-style interior shutters are offered in cherry, walnut, and hard maple as well as the standard basswood. Plantation-style treatments adapt to all window shapes. The Shuttery of Nanik. **448**



Tile roofing
Catalog illustrates nine styles of clay-tile roofing available in 20 standard colors, as well as special accessories for hip, valley, and eave installations. Tile roofing details offered. Ludowici-Celadon, Inc. **449**



Composite slate
Heritage Slate, a larger and lighter, European-style fiber-cement shingle designed for large project work or more economical residential roofs, comes in black, gray, and green colorations. Supradur. **450**

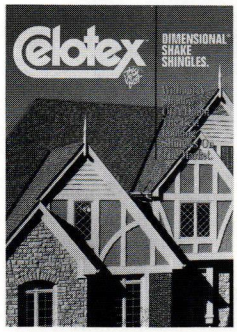
THE PELLA ARCHITECT SERIES. BECAUSE THERE'S NO SUCH THING AS



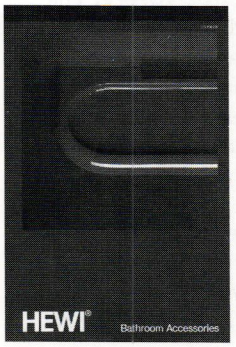
DRAFTY ORIGINAL DESIGN.

ENERGY EFFICIENT, NOT HISTORICALLY CORRECT COMPETITOR, 1992.

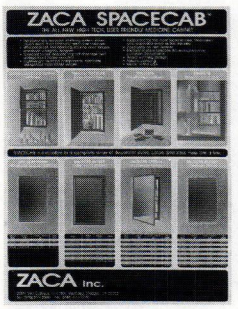
ENERGY EFFICIENT, HISTORICALLY CORRECT PELLA WINDOW, 1992.



Shake look
A four-page brochure describes the Dimensional Shake line of fire-rated asphaltic roofing shingles, illustrating residential roof installations in all current color choices. Celotex. **451**



Bath accessories
German-made towel bars, cabinets, mirror units, shelves, and other bath designs—more than 60 products—are illustrated in an updated Hewi catalog. Designs come in 13 colors. HEWI, Inc. **452**



Medicine cabinet
Flyer describes the Spacecab home bath cabinet, which has modular, adjustable shelves to accommodate tall objects alongside short ones without wasting storage space. Zaca, Inc. **453**



Acrylic fixtures
Catalog illustrates plumbing designs, including showers, soaking tubs, and whirpools, made of acrylic in a choice of 28 colors. Safety features include integral grab bars and nonslip bottoms. Clarke Products. **454**

Redwood lumber
Performance and specification guide explains the cost and appearance benefits of Desert Dry redwood, a new product line that is priced much less than all-heart redwood. Louisiana-Pacific Corp. **455**

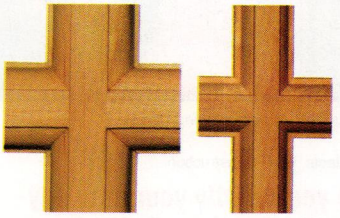


continued on page 162

SORT OF ARCHITECTURALLY CORRECT.

Any other divided glass window design with double glazing also comes with unwanted side effects. Most noticeably, muntins that are a full 1/2" wider than the originals. Which isn't a small problem. In fact, it's the one that you can easily see from the curb.

The Pella Architect Series™ is a technologically advanced divided light window that looks like it was built in 1795, but can keep your house so snug it can withstand desert heat, arctic temperatures, torrid rain and hurricane winds. And we've thrown them into environmental chambers to be absolutely certain.



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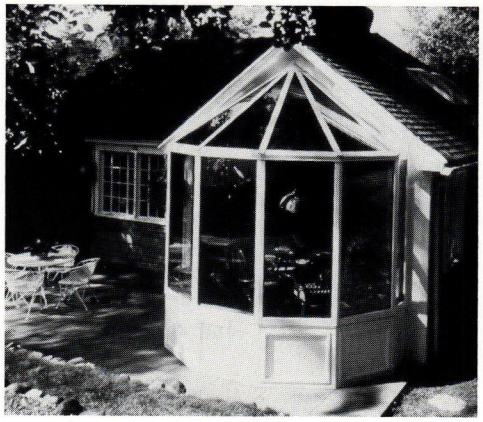
City_____State_____Zip_____Phone_____

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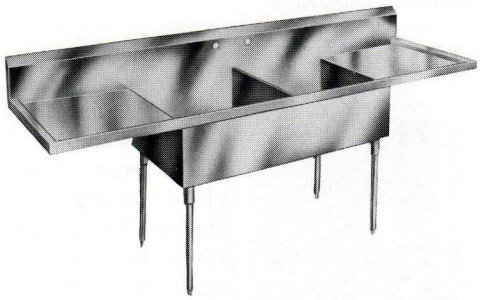
BUILT TO IMPOSSIBLY HIGH STANDARDS.

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continued from page 155

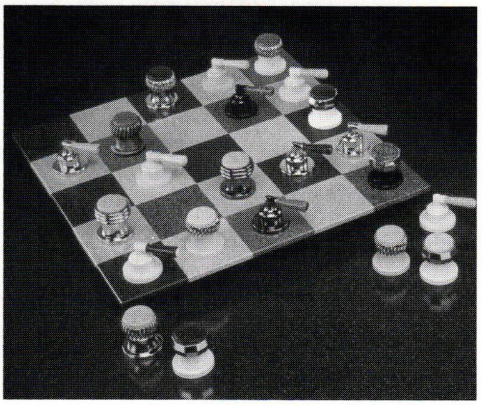
320. Cedar-framed conservatory. The Sun Crescent is a new design from a maker of wood-framed sun spaces offered in factory-numbered kits. Made up of wedge-shaped bays and roof segments attached to the house from a central hub, the one-story structure fits well on the gable end of a house. The room comes in different bay dimensions and roof slopes, with framing mullions capped in aluminum. Options include a range of energy-efficient glazing, operable windows, and knee walls. Lindal Cedar Homes, Seattle.



321. Commercial sink. Set on stainless steel tubular legs and bullet-shaped feet, the Sturdibilt scullery sink is for the serious cook with serious cleanup jobs. Square corners and a channel rim prevents spillover; drainboards and sink compartments are pitched to facilitate draining. Elkay Mfg. Co., Oak Brook, Ill.



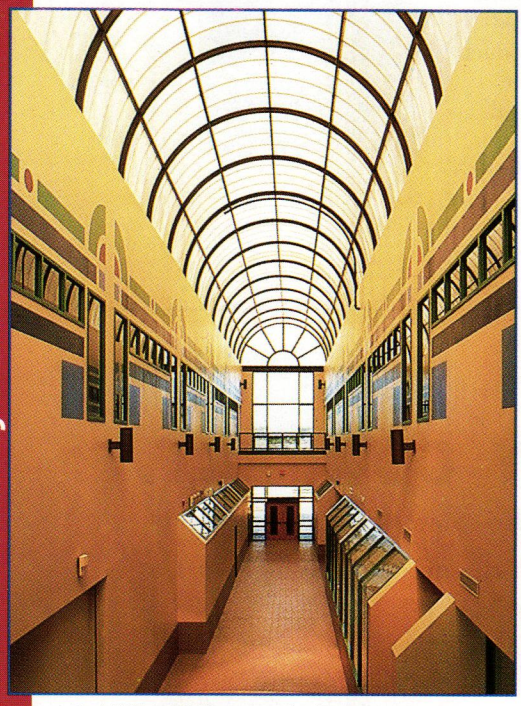
322. High/low kitchen faucet. The Riser spout lifts 10 in. above the sink to fill or rinse large pots or vases, while staying out of the way during normal use. Part of the Legend kitchen line, it comes in chrome as well as colors such as Glacier White, pictured. Moen, Inc., Elyria, Ohio.



323. Solid-surface handles. DecorLine offers pop-up knobs and faucet handles in all Corian Sierra Granite colors, to match countertops and sinks. Gerber Plumbing Fixtures Corp., Lincolnwood, Ill.

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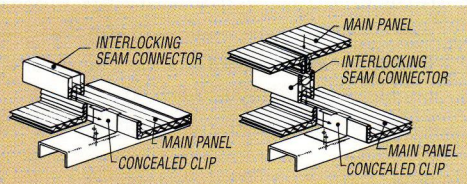
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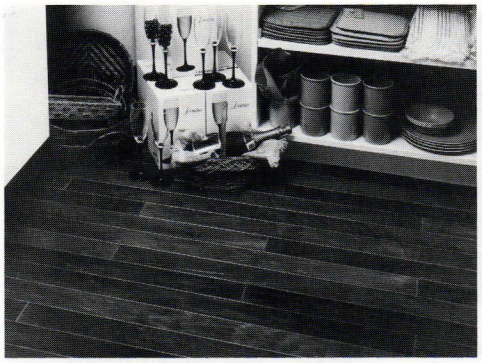
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326. Marble-pattern floor. Whitney Place, a large-scale pattern with a realistic tile look, is a new design in the Silverado line of sheet-vinyl residential flooring. The pattern comes in slate gray, light jade, a gold-tone shell, and tan colorways, with a 36-in. repeat. Mannington Resilient Floors, Salem, N. J.

Continued on page 160

324. Stained-wood flooring. Blue Lindenwood is a new color-and-specie in the Timeless Series II line of laminated-plank flooring. A hard acrylic finish on the 1/8-in. wear surface resists abrasion and requires a minimum of maintenance. Beveled-edge planks come in random lengths from 12- to 46-in. PermaGrain Products, Inc., Media, Pa.



325. Wood-burning stove. Heartland makes traditional wood- or coal-burning ranges that can cook, bake, hold warm food and hot water, and heat up to 1800 sq ft of space. Shown is the circa-1906 Oval, with 6 sq ft of cast-iron cook-top. Also available in the same wood-burning, country look are natural gas, propane, or electric stoves in sizes from 30- to 48-in. wide. Stoves come in white or almond porcelain enamel, or all black; prices range from $2,400 to $3,900. Heartland Appliances, Inc., Kitchener, Ont.

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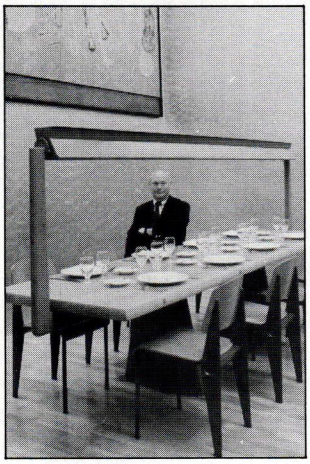
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What a bloody contrast between digging rock in Vermont and posing for pictures in New York.

"I've always admired the simplicity of Fifties design, so it was fun to get involved with architect Henry Myerberg's plans for New York's *West Broadway* restaurant. It's a SoHo bistro (at 349 West Broadway) and the brainchild of furniture and art dealer Tony DeLorenzo. One of Tony's enthusiasms is French Fifties furniture and, with Henry, he's created a great new showcase (see October 14 *New York* Magazine) for the style.

That's me sitting at a Jean Prouve library table.

"If you haven't seen *West Broadway* yet (the food is good), here's a photo of the interior. All the dining room chairs, the barstools and some of the tables were designed by Prouve, an engineer, architect, industrial designer and pioneer in curtain wall design. The black steel chandeliers, almost mobiles, are original fixtures designed by silversmith and sculptor Serge Mouille. The hewn walnut irregular bartop in the front room is an original by sculptor/wood craftsman George Nakashima. The wall panels behind me, with their images of musical instruments, are by Pierre Bobot, and originally hung in Roseland Ballroom.

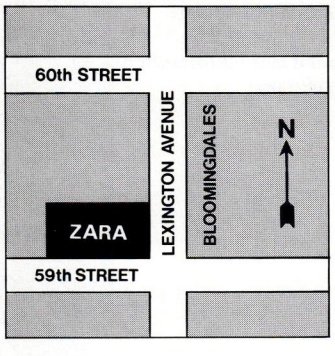


"We covered the floors of the high-traffic bistro areas and the stairs to the dining balcony with Vermont Unfading mottled green and purple slate, hand-split of course, with a natural cleft surface. We used tiny modules for those small spaces, and the result, I think, is the perfect subtle ground for *West Broadway's* design dramatics.

Next time you're in Bloomingdales, take a walk across the street.

"There's a marvelous "fast fashion" (they change inventory every ten days) store called *Zara* at 59th and Lexington. We covered the window display areas and the countertop surface of the cash/wrap desk with Norwegian Black Lace Slate. I love to watch people rub their fingers over the slate and cock their heads to catch the changing reflections in the countertop. It's another job we're proud of, and we're looking for more, maybe your job. If you're considering slate for a quality custom project, don't worry about budget until you've talked to me, even if you're still just in the talking stage. Just call me at 1-800-343-1900."

Bill Markcrow



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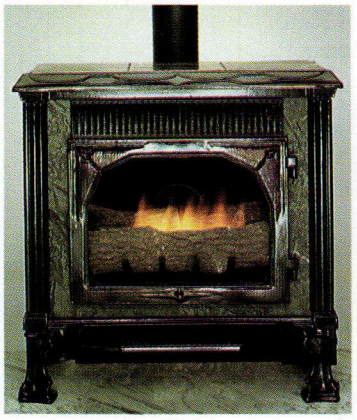
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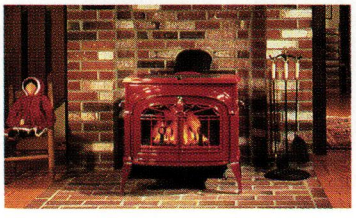
continued from page 159



327. Woodburning insert. The Country Comfort uses a secondary-combustion, catalytic assist said to burn wood cleaner longer. Features include curved glass doors, porcelain finish (Dove Gray is shown), and thermostatically controlled blower. Orrville Products, Orrville, Ohio.



328. Stone stove. The Sterling gas heater has a large fire-viewing window as well as stone and cast-iron construction that modulates on/off cycling, producing efficient, steady heat. Comes in polished soapstone and tamarack or boiaderro serpentine and four enamel colors. HearthStone, Morrisville, Vt.



329. Clean heat. The Defiant Encore emits less than half the level of particulates permitted by EPA standards, while producing enough heat for 1,900 sq ft of space. It has a built-in top griddle for cooking. Vermont Castings, Inc., Randolph, Vt.

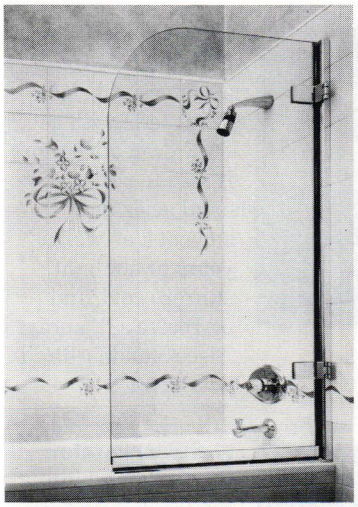


330. Dual fuel. The Sequoia is EPA-certified to burn both wood and coal. A contemporary-style stove, it's shown here with optional pedestal stand and brass trim. Burns at 77 percent efficiency. Consolidated Dutchwest, Randolph, Vt.

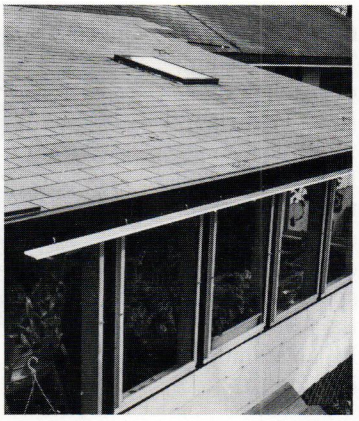


331. Euro-style. A new stove from Austria, the design-award-winning Arte has a sleek, barrel shape covered with custom-color Italian ceramic tiles. These hand-dipped tiles, made of rare argillaceous earth, retain and radiate warmth from the wood-burning fire. The stove is said to burn cleanly, emit practically no particulates, and to be easy to operate and maintain. Austroflamm USA, Inc., Hayward, Calif.

For more information, circle item numbers on Reader Service Cards.



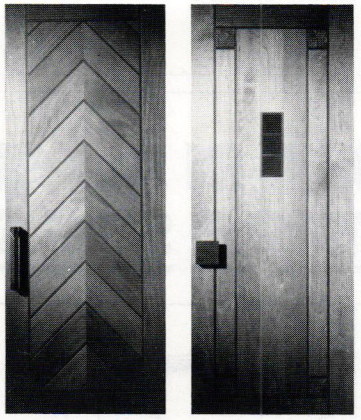
332. Bath screen. A style often used in Europe, Majestic's all-glass shower screen is designed in England and made in the U. S., part of a new line of bath accessories and enclosures. This screen is a single sheet of 3/8-in.-thick tempered safety glass which swings on brass hinges to fit snugly against the waterproof tub rim. The Majestic Shower Co., San Francisco.



334. Rain-dispersion system With an appearance much less obtrusive than standard rain gutters and leaders, the Rainhandler hangs just below the roof edge to break up sheets of roof rain into smaller, softer droplets and guide them away from the foundation. The louvered disperser is made of aluminum, and is said not to clog with leaves or form ice dams. A demonstration video-tape is available free to architects. Savetime Corp., Bridgeport, Conn.



333. Gothic window. A new line, Radius Revival double-hung and casement windows and French-style doors replicates the arched effect of 19th-century designs. The units are custom-made of Western wood with primed exteriors and natural-finish interiors. Glazing options include historically correct insulated divided lights. Vetter, Wausau, Wis.



335. Customized entrance. Each Moderne door can be ordered with a unique mix of linear or square elements, hardwoods, and accents like stainless-steel corner squares and matching doorpulls. Shown above are Chevron and Mitered Plank door styles, with recessed wood accents in custom-finished koa, rosewood, and ebonized hardwood. Forms + Surfaces, Santa Barbara, Calif.

continued on page 164

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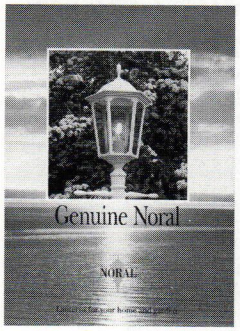
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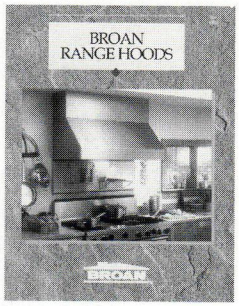
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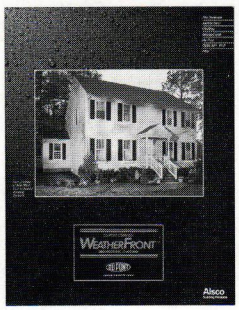
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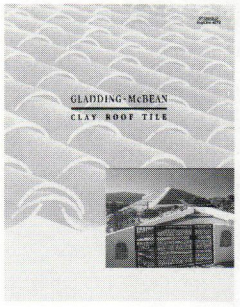
Outdoor lighting
Lanterns with opalescent, shatterproof lenses in polycarbonate are featured in this brochure. Lanterns can be equipped with either low-energy compact fluorescent tubes or incandescent bulbs. Noral Lighting, Inc. **200**



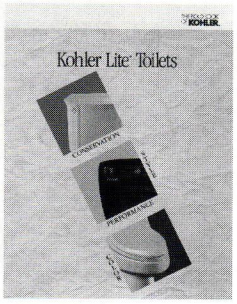
Range hoods
This 16-page brochure shows the latest in kitchen range hoods. Downdraft ventilation, Euro-Style design, electronic controls, and infinite speeds are some of the features offered. Broan Manufacturing Co. **201**



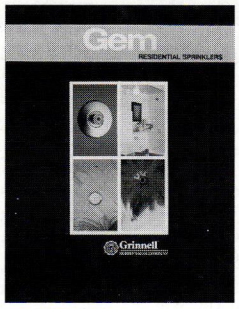
Exterior cladding
Maintenance-free architectural cladding made with a PVF protective film is said to resist powerful acids and solvents, as well as years of sunlight, subzero cold, and corrosive salt spray. Alsco Building Products. **202**



Roof tiles
Clay roof tiles that are fireproof and frostproof are available in a variety of shapes, sizes, and colors. The low-maintenance material can be glazed or customized as well. Gladding, McBean. **203**

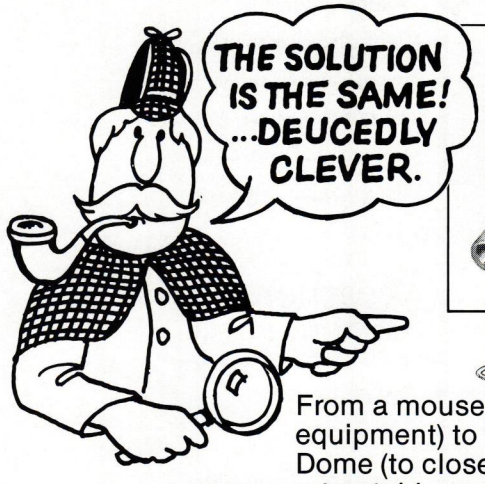


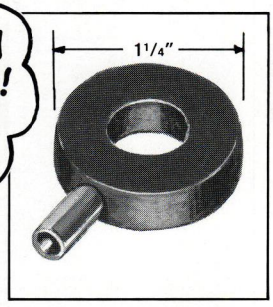
Efficient toilets
Toilets with a new flushometer operating system use only 1.5 gallons of water per flush, while providing high-performance waste removal, minimal tank condensation, side-trip levers, and a variety of styles. Kohler Co. **204**

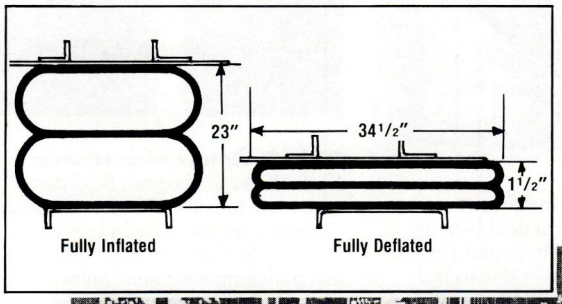


Fire suppression
Gem catalog highlights a line of fire-protection devices specifically for residential applications. Products include unobtrusive flush-mount heads and rapid-response sprinklers. Grinnell Corp. **205**

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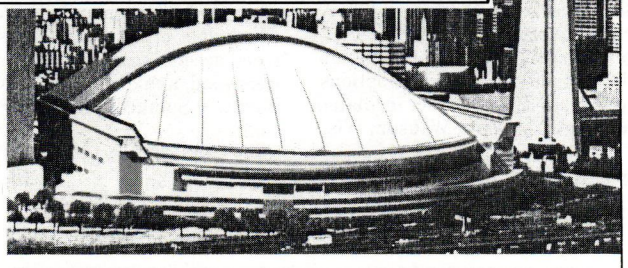






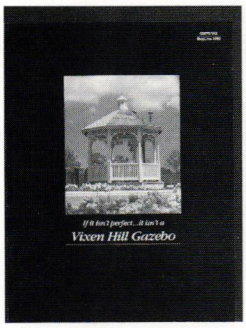


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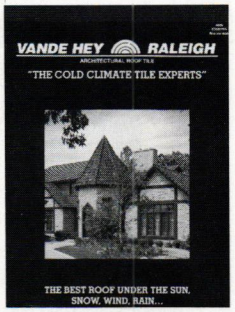


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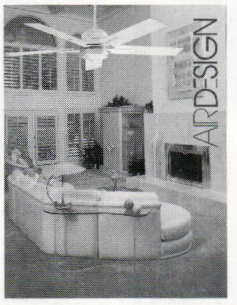
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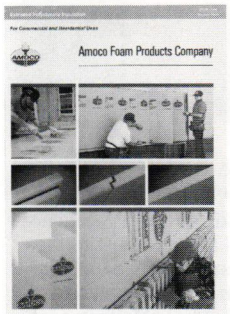
Wood gazebos
Machine-milled, hand-finished cedar gazebos come in a variety of styles, from Colonial to Victorian. Structures are prefabricated and can be assembled without any impact tools. Vixen Hill Manufacturing Co. **206**



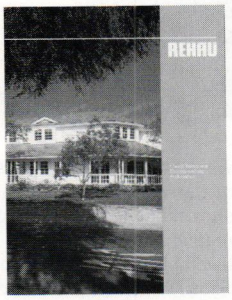
Roof tiles
Concrete roof tiles, available in 20 standard colors and five styles, withstand wind-driven rain, absorb little moisture, and resist termites, rodents, and rot. Also available in custom colors. Vande Hey Raleigh. **207**



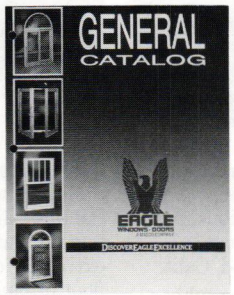
Ceiling fans
This brochure describes a full line of non-nostalgia, energy-efficient, wobble-free ceiling fans. Electrostatically applied powder-coat paint, accessory fan blades, and integrated lights are available. Emerson Electric Co. **208**



Foam board
A new rigid foam insulation board is made with at least 50 percent recycled polystyrene resin. The product is part of a line of foam boards appropriate for foundation, wall, and roofing applications. Amoco Foam Products Co. **209**



Vinyl doors
Solid-vinyl French and atrium doors with tilt-turn profiles and European styling offer new possibilities for architects specifying products in residential, commercial, and institutional projects. Rehau Inc. **210**



Windows/doors
An architectural catalog presents windows and doors with photos, details, and diagrams. Explains the Modern Divided Light option, with exterior muntins of aluminum and interior of pine. Eagle Window & Door, Inc. **211** ■





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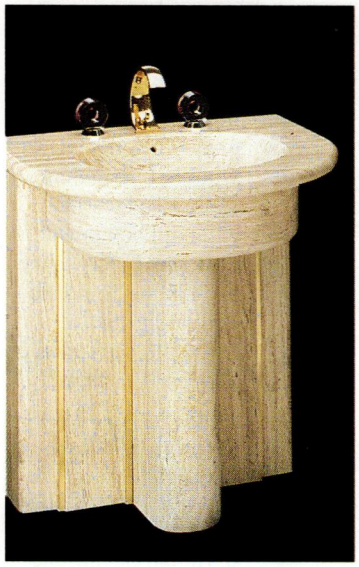
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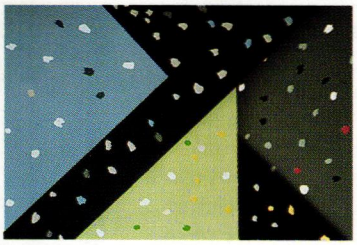
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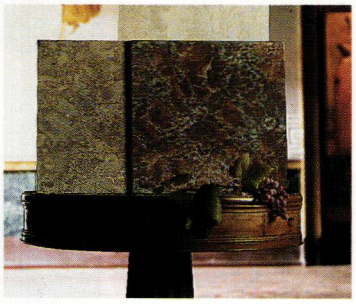
Circle 62 on inquiry card

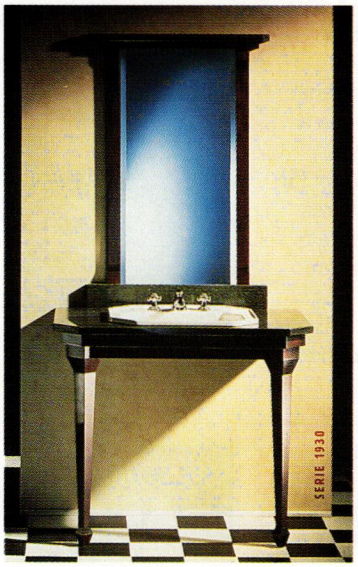
continued from page 161

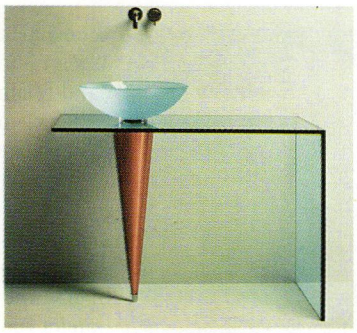
For more information, circle item numbers on Reader Service Cards.













336. Luxurious. Travertine pedestal basin has removable side pieces to cover plumbing connections. Accent stripes can match faucets. Bates and Bates, Lakewood, Calif.

337. Spatters. Spotfloor rubber flooring has paint-like dots splashed against black or contrasting-color grounds. Pirelli, Teaneck, N. J.

338. Marble veined. Precious Stones ceramic-granite tiles mimic the three-dimensional, irregular patterns of natural marble in an extremely durable, stain-resistant floor product. GranitiFiandre, Bensenville, Ill.

339. Deco. Serie 1930 is Duravit's line of vanities, storage cabinets, wash stands, and mirrors with a feel of the Weimar era. Washstand shown has legs of mahogany-stained maple, black-granite top and backsplash, and white china basin. Santile International Corp., Houston.

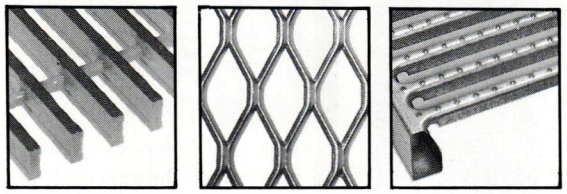
340. Balanced. Geometric and elegant, the Olimpia lavatory sets a glass bowl on a glass slab supported by a copper leg. Hastings Tile & Il Bagno Collection, Freeport, N. Y.

341. Accessible. The Precedence bath/whirlpool has a water-tight side door that swings open to make getting into (and out of) the tub much easier. Tub has a folding seat. Kohler, Kohler, Wis.

Continued on page 173

Safety Gratings!

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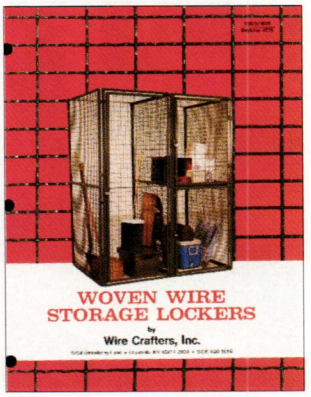
18 Bedford Row
Dept. P.R.
London, WC1R 4EJ
England

Name _____
Institution _____
Street _____
City _____
State _____ Zip _____

Product Literature Showcase

Here are some building products, catalogs, brochures, and technical literature available in the architectural market today. To receive your copy of any of them, circle the corresponding number on the Reader Service Cards bound to the back of this issue.

WOVEN WIRE STORAGE LOCKERS

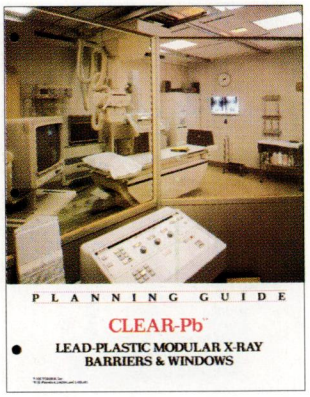


Woven Wire Storage Lockers from Wire Crafters are the heaviest lockers available for multi family building storage areas. Choose from single or double tier styles. A variety of standard sizes, and custom units are available. Specify the best for building owners and residents. Choose Wire Crafters for your next storage area project.

Wire Crafters

Circle 64 on the inquiry card.

FREE X-Ray Room Planning Guide

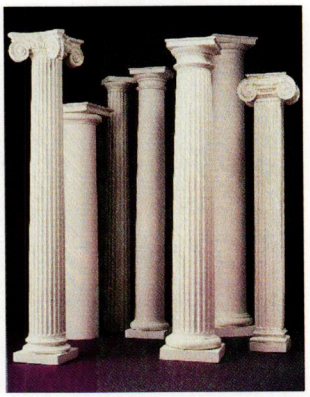


New guide illustrates userdesigned installations of CLEAR-Pb Lead-Plastic Modular Barriers and Windows in hospitals, radiation therapy centers. CLEAR-Pb is a transparent, lead-impregnated plastic sheet in lead equivalencies from 0.3 to 2.0 mm, over 200 stock sizes up to 6 x 8 ft. (larger on special order.) Nuclear Associates.

Nuclear Associates

Circle 65 on the inquiry card

CHADSWORTH COLUMNS



Classic Authentic Replication wooden columns and pedestals, Architectural Stock, Art Deco, Contemporary and custom designs available in pine, redwood and other wood species. Shipped factory direct to job site. Chadsworth - The number one column company in America. Free flier. Catalog requests (800) 394-5177. Sales orders (800) 486-2118. Other inquiries (404) 876-5410.

Chadsworth Incorporated

Circle 66 on the inquiry card.

New 88-Page TimberForm Site Furnishings Catalog

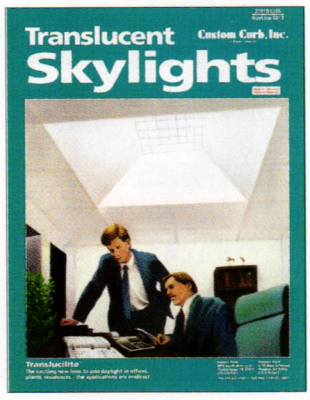


More than 350 products made of cast iron, perforated metal, steel, welded wire & wood are offered in a dozen different design series in styles from traditional to contemporary. Ash receptacles, benches, bike racks, bollards, litter containers, picnic & game tables are presented in design coordinated families. Over 170 designer colors available. Photos, technical data & product dimensions are shown. Call 1-800-547-1940 (ext. 502).

Columbia Cascade Co.

Circle 67 on the inquiry card.

Translucilite Skylights to Fit Your Exact Needs



Add daylight in offices, plants, residences -- the applications are endless. Ideal for conventional, built-up, shingle roofs or pre-engineered metal buildings. The translucent skylight/ integral curb unit is low profile, self-sealing, self-flashing & available in any dimension within 5' wide and 22' long to fit the exact structural opening or interior size requirement for new construction or retrofit. Colorful, fact-filled new brochure. 1-800-251-3001

Custom Curb, Inc.

Circle 68 on the inquiry card.

Lifetime Warranty On Tectum Ceiling System



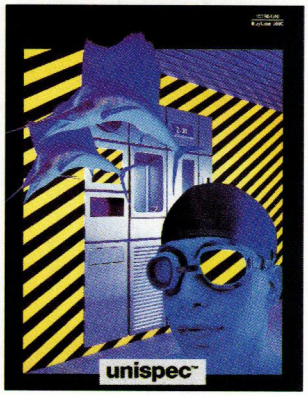
The Tectum Inc. Acousti-Tough™ ceiling system now carries a lifetime limited warranty against panel breakage. Featuring the well known Tectum abuse resistant acoustical panels and a special clip that repositions panels if they are pushed up from the grid, the system has been proven in school applications where replacement is a major cost item.

Tectum

Circle 69 on the inquiry card.

Product Literature Showcase

Limited Only By Your Imagination



The possible configurations of modules, materials, colors and finishes are limited only by what you envision.

We do the rest!

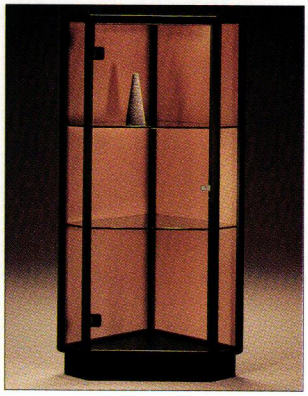
These Modular Wall Systems can be integrated with other manufacturer's components.

There's no need to come up against a wall selecting a Modular Wall Unit for your next project.

Unispec

Circle 70 on the inquiry card.

Display Your Good Taste

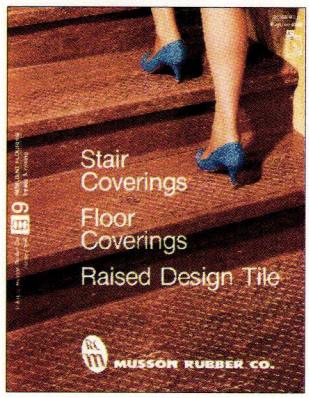


Elegant Enclosures are available in Freestanding, Counter and Wall Mounted models. Designed to make your 'goods' look good, while they enhance the environment around them. Showcase frames are finished in Natural anodized aluminum, Duranodic bronze or 27 colors. Tempered safety glass and locking doors are standard. Optional lighting systems are available.

Peter Pepper Products,Inc

Circle 71 on the inquiry card.

Mats and Matting Brochure

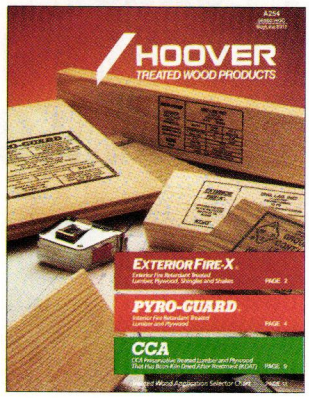


Contains helpful illustrations and specifications on fire safety and other rubber floor and stair tread systems featuring many different marbleized or plain raised and surface designs in all decorator colors. Included are rubber landing and riser materials, vinyl treads and risers, fluff cord and traffic tiles along with recommended adhesives. Musson Rubber Co., P.O. Box 7038, Akron, OH 44306.

Musson Rubber

Circle 72 on the inquiry card.

National Evaluation Report Issued

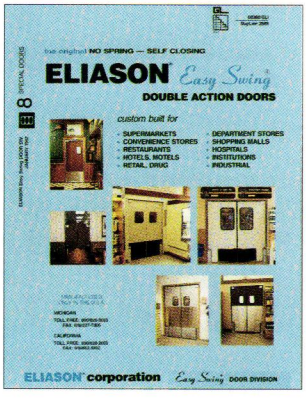


PYRO-GUARD third generation interior fire retardant treated lumber and plywood is thoroughly strength-tested after exposure to high temperatures. It will maintain strength in recommended applications including plywood roof sheathing and roof trusses. Like all such reports, the NER on PYRO-Guard is subject to re-examination, revisions, and possible closing. Hoover Treated Wood Products, Inc.

Hoover Treated Wood

Circle 73 on the inquiry card.

Self Closing Double Action Doors

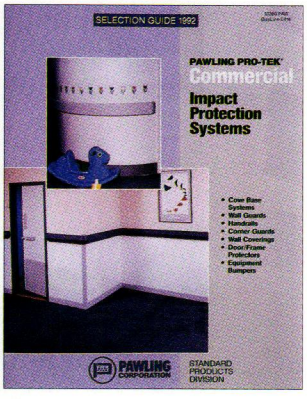


Eliason Corporation manufactures custom built Easy Swing double action interior doors for light, medium or heavy traffic doorways. They can also be specified with exotic decorative finishes for very posh areas. A complete price spec catalog illustrated in four color which contains complete specifications, usage & application data will be sent to all Architects & Spec writers. Doors can be specified & purchased direct.

Eliason Corporation

Circle 74 on the inquiry card.

Impact Protection Systems: Wall & Corner Guards



Full-color catalog features wall/corner guards, handrail &cove base systems, wallcoverings & door protection to reduce impact damage in office & commercial buildings, hospitals, & healthcare facilities. Many styles & colors available. Pawling's Pro-Tek® products are designed to work as a coordinated system, in matching or contrasting colors for a unified, finished look, or to identify areas or traffic patterns. For more info: 157 Charles Colman Blvd., Pawling, NY 12564, 800-431-3456,(NY) 800-942-2424.

Pawling Corporation

Circle 75 on the inquiry card.

Stunning Bronze, Brass & Pewter Entry Systems



Lustr-Metl® real polished metal doors for up-scale Homes, Churches, Temples or Fire-rated entrances. Over 50 models; many with eye-opening insulated glass panels with distinguished designs with bevels and brass came.

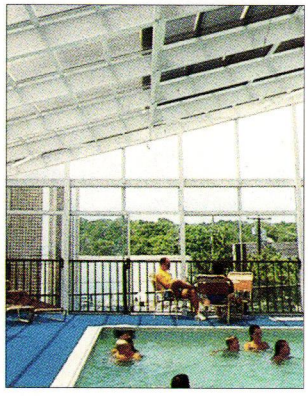
Large doors a specialty.

Exclusive and Truly Stunning

Kaylien, Inc.

Circle 76 on the inquiry card.

Aluma-Glaze Corporation



Aluma-Glaze Corporation
1601 S.W. 71st Terrace
Hollywood, Florida 33023

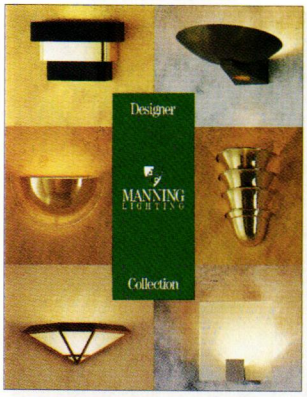
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Aluma Glaze

Circle 77 on the inquiry card.

Manning Lighting Fixture Designer Collection

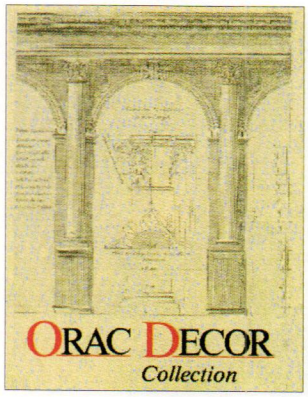


R.A. Manning Co. offers a line of standard fixtures for commercial & institutional use. The "Designer Collection" includes a variety of designs in contemporary wall sconces & pendant fixtures. This new line offers designers, architects & specifiers a variety of sizes, materials, colors & lamping possibilities. Manning has been a leading manufacturer of high quality custom lighting for churches, schools & public buildings. R.A. Manning Co., Sheboygan, WI 53081-1063, 414-458-2184, Fax 414-458-2491.

R.A. Manning Co.

Circle 78 on the inquiry card.

Outwater Plastics

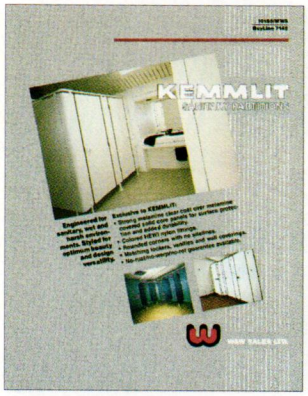


Presents the Orac Decor Collection produced of high density polyurethane. Extremely durable, easy to work with, light-weight, simple to install. Architectural products such as cornice mouldings, panel mouldings, chair rail, wall lighting, ceiling medallions, niches, corbels, pilasters and columns. Excellent for new exterior/interior designs, commercial and residential. Free catalog available. Outwater Plastics, 4 Passaic St, Wood-Ridge, NJ 07075. 800-631-8375.

Outwater Plastics

Circle 79 on the inquiry card.

Sanitary, Waterproof Cubicle/Locker Systems

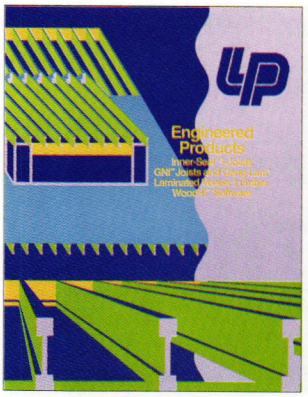


Only KEMMLIT has melamine clear coat over melamine covered solid core panels; colorful HEWI nylon fittings; rounded edges; long-term no rust/warp/rot guarantee; matching walls, doors, changing tables - all designed for sanitary, wet and harsh environments, indoors and out. Total systems for hospitals, schools, swimming pools, health clubs.

W&W Sales, Ltd.

Circle 80 on the inquiry card.

Engineered Products

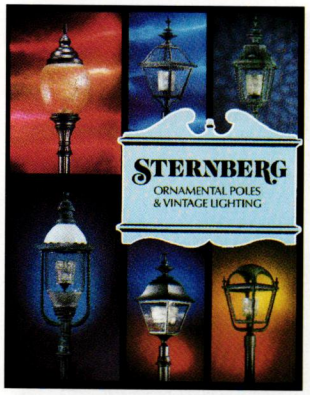


Louisiana-Pacific's engineered wood products are designed to eliminate the common problems of solid sawn lumber. Gang-Lam LVL, Inner Seal I-Joists and GNI Joists are stronger, more stable and easier to handle. Catalog includes span and uniform load charts, and information on the Wood-E engineering software package.

Louisiana-Pacific

Circle 81 on the inquiry card.

Ornamental Poles and Vintage Lighting Fixtures

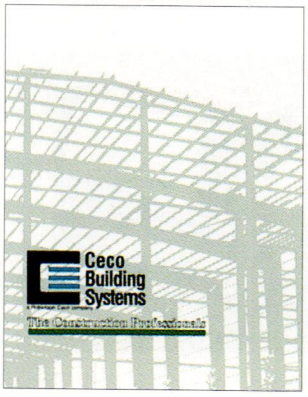


Historical elegance with unequaled performance. Ornamental lampposts, fixtures and bollards of heavy duty cast aluminum, welded for single unit construction and durability. Minimum maintenance, vandal resistant. Illustrated 48-page catalog with prices. Photos show nationwide installations including photos of malls, retail stores and downtown shopping districts.

Sternberg Lanterns

Circle 82 on the inquiry card.

THE CONSTRUCTION PROFESSIONALS

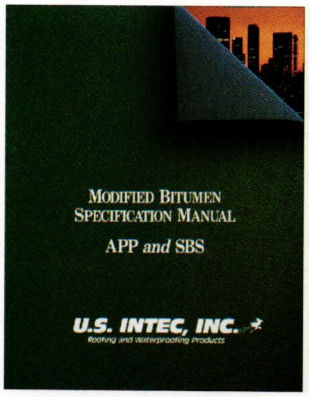


This new 16-page brochure is an overview of the capabilities of Ceco Building Systems in pre-engineered metal building construction. The Construction Professionals includes dramatic photography of completed projects, plus technical data including Frame Systems, Tilt-Wall Construction, Multi-Story Construction, Covering Systems, Roofs, Architectural Treatments, Retrofit, Accessories and Mini-Warehouses.

Ceco Building Systems

Circle 83 on the inquiry card.

New Roofing Manual For Architects

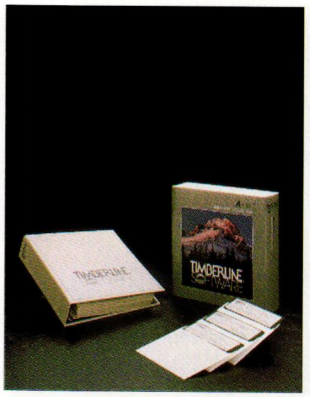


Roofing manufacturer U.S. Intec's new specification manual uses a Construction Specification Institute format to outline application procedures for its line of modified bitumen roofing products -- including Brai APP and SBS membranes and MWeld prefabricated and pre-flashed roofing accessories. U.S. Intec is a leading manufacturer of modified bitumen and built-up roofing products and accessories. For more info call 1-800-62-INTEC.

U.S. Intec

Circle 84 on the inquiry card.

AEasy Plus



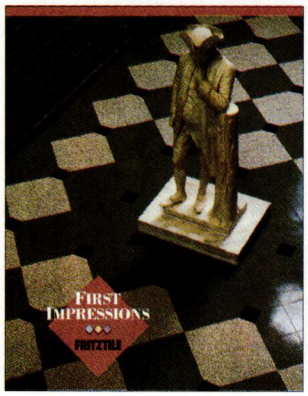
AEasy Plus, new project management software designed specifically for architects and engineers, includes full departmentalization eliminating guesswork about which departments are most profitable. It also lets you void invoices any time, even months later, and get a new invoice out the same day. Disputed amounts won't tie up your cash flow.

Timberline Software

Circle 85 on the inquiry card.

Product Literature Showcase

First Impressions



The 1992 Fritztile catalog uses a combination of style, brilliant color & useful information to leave the reader with a positive first impression. This piece features pictures of the individual Fritztile lines and installations where they've been best used to help the architect achieve his vision. For specifiers, the catalog features extensive technical info. For quality and style, it's Fritztile. P.O. Drawer 17040, Dallas, TX 75217. (800) 955-1323. FAX 214-270-0179.

Fritztile

Circle 86 on the inquiry card.

Reynobond®FR Aluminum Composite Panels

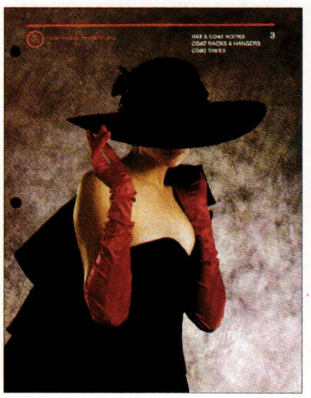


Reynobond®FR Aluminum Composite Panels were utilized as spandrel panels, fascia, soffit, column covers & truss beam wrap on the M.I.T. Lincoln Laboratory Facility. Reynobond®FR is the only solid thermoplastic core composite panel whose core material is categorically inert, non-toxic & fire resistant. Case history available with supporting data. Reynolds Metals Co., P.O. Box 27003, Richmond, VA 23261. 804-281-3629.

Reynolds Metals Co.

Circle 87 on the inquiry card.

Hat & Coat Hooks, Racks and Coat Trees

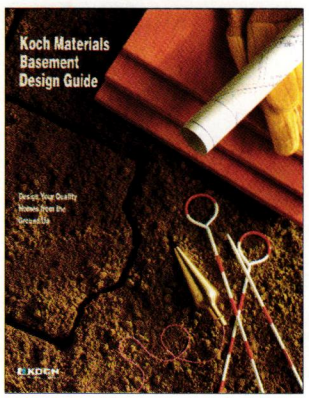


Hat & Coat Hooks, Racks, Umbrella Stands and Coat Trees are offered in a variety of hook and hanger combinations. Select from over 200 of the highest quality hook styles finished in elegantly polished metals, anodized colors or warm rich woods. Multiple hooks mounted on wood or acrylic bars are available.

Peter Pepper Products,Inc.

Circle 88 on the inquiry card.

Discover The Value In Basements



The Basement Design Guide from Koch Materials Company can help you discover new ideas in designing warm, dry, comfortable living spaces in below grade areas. This 20-page brochure highlights construction techniques and design considerations that help make the basement a value to you and your buyers. Includes information on a 10-year limited warranty against exterior foundation leaks.

Koch

Circle 89 on the inquiry card.

Westchester Marble And Granite

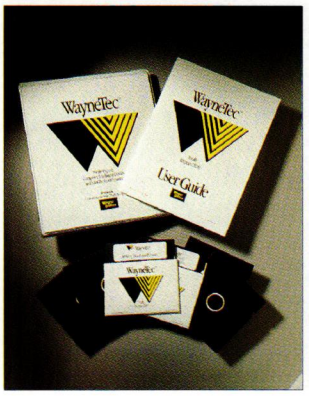


WMG offers the widest selection of French limestones, in addition to a complete line of exotic marbles, granites, and other natural stones. All stone tiles are available in coordinating slabs for countertops, fireplaces, and other custom pieces. Complete brochure upon request. 31 Warren Place, Mount Vernon, New York 10550. Call (914) 667-1600 or Fax (914) 667-6244.

Westchester Marble

Circle 90 on the inquiry card.

Specifying upward acting doors made simple

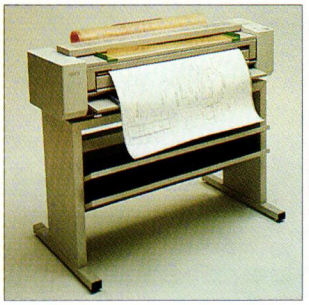


WayneTec™, a computer-intelligent details and specification software package, eliminates the tedious process of specifying commercial/industrial upward-acting doors, and may be used effectively by specifiers with minimal experience. The WayneTec system will also provide product-specific AutoCADD® drawings and CSI-formatted specs.

Wayne-Dalton Corp.

Circle 91 on the inquiry card.

Xerox 2515 Engineering Copier

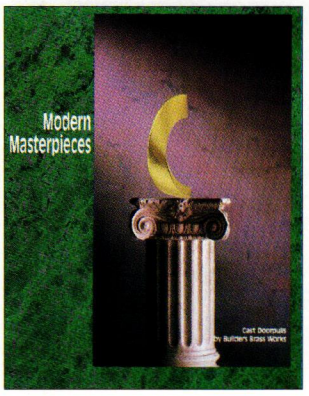


The Xerox 2515 is Xerox's newest engineering copier that builds on the field-proven technology of the Xerox 2510 to enhance reliability, performance & equipment operability. With the Xerox 2515, you get in-house copying convenience at an affordable price. The Xerox 2515 copier prints drawings up to 36" x 20' long so you can make copies of large documents on demand without sending them out for reproduction.

Xerox

Circle 92 on the inquiry card.

Cast Doorpulls by Builders Brass Works

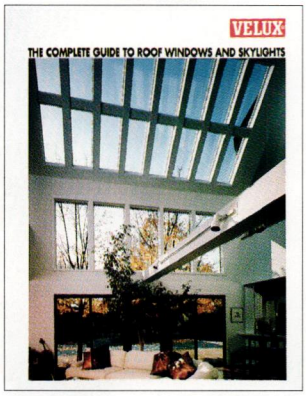


When only the rare and wonderful will do, choose from our exquisite and flawless collection in solid brass, bronze and aluminum...or let us handcraft whatever you can imagine. **Call (800) 533-6229**. In Los Angeles: (213) 629-8111. Or fax your design: (800) 888-6855.

Builders Brass Works

Circle 93 on the inquiry card.

VELUX Roof Windows and Skylights

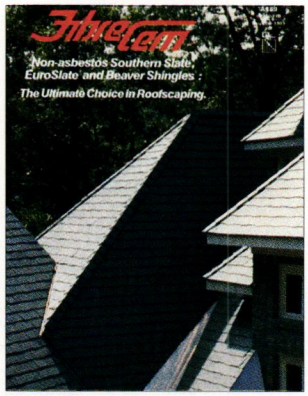


New 1992 full-color brochure features helpful information and designs for the complete line of Velux Roof Windows, Skylights, Sunscreening Accessories and Controls. New 1992 products include the Round Top Accent Roof Window and hand-held Infrared Remote Controls for opening out-of-reach skylights, roof windows and venetian blinds. Pricing and dealer list included.

Velux-America Inc.

Circle 94 on the inquiry card.

Slate-Simulated FibreCem Roof Slates



Four-color brochure describes features of non-asbestos fiber cement simulated slate roof slates in creating elegant & appealing rooflines. Four slate products available. Slate characteristics, general uses & applications (including freeze-thaw) & various Roofscaping[sm] designs are among features detailed. Color chart on 16 new optional colors also included. 50-year limited transferrable warranty. Call 1-800-346-6147 or Fax 704-588-2096.

FibreCem Corporation

Circle 95 on the inquiry card.

Adjustable Fixture Co.

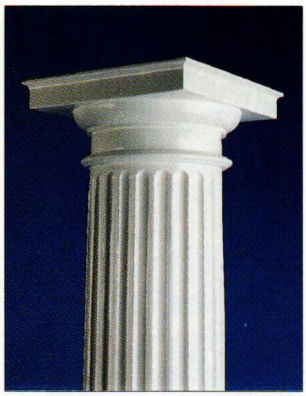


New custom-designed table lamp for lounge & day rooms. Nightingale Brass 'n Color series features a choice of 7 standard colors or 1500 custom Benjamin Moore finishes. Indestructible, flame retardant Fiber Last shade, anti-theft Perma-Mount base & Safety Guard to prevent access & removal of bulbs are options available. Heavy-duty construction, 5 yr. warranty, UL & CSA listed. Free 30 day trial offer. 800-558-2628 or fax 414-964-2944 for info.

Adjustable Fixture Co.

Circle 96 on the inquiry card.

Worthington Group

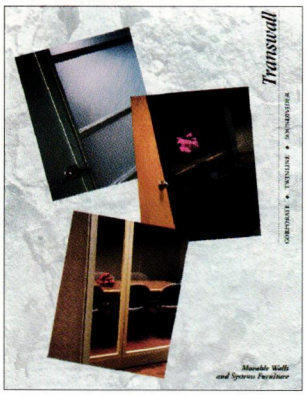


Introducing the Classical Tuscan Column, based on designs of Vitruvius and Vignolo; and crafted in pine. Our large volume allows us to offer these authentic replications of classical designs at a price far more reasonable than other companies. Worthington also offers fiberglass balustrading, plaster moulding and much more. Shipped factory direct. 44 page color catalog. Call (800) 872-1608.

Worthington Group

Circle 97 on the inquiry card.

Open & Private Offices A Single Source

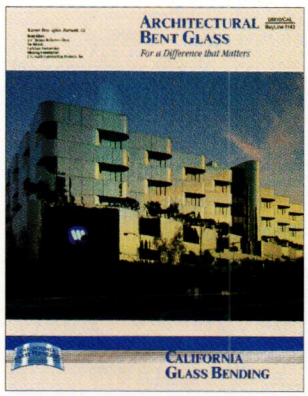


Transwall combines these two basic wall requirements for today's high tech office with its Soundivider open plan system and the full height Corporate series. The two systems offer complete interchangeability of wall mount components, as well as compatibility in design and appearance. Modular furniture blends with panel mounted work surfaces. Electrical and electronic support is system integrated.

Transwall Corp.

Circle 98 on the inquiry card.

Architectural Bent Glass by California Glass Bending

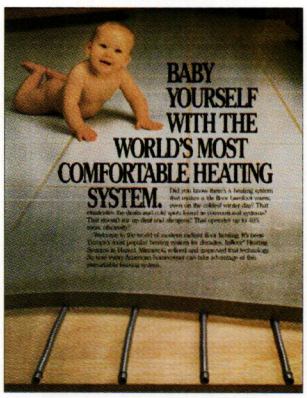


Color brochure describes Architectural Bent Glass. 10 bent glass applications are shown as well as interior/exterior uses. Applications include curtain wall & spandrel, corners & transition areas, stair-rail balustrades & landings, revolving doors & canopies. Company bends float glass(up to 1"), Laminated safety, Themal insulated, Spandrel, Heat-resistant, Wire, Patterned & Cathedral, & Custom Laminated. Contact Kelly Green, 320 E. "B" St., Wilmington, CA 90744. 800-223-6594 or FAX 310-549-5398.

California Glass Bending

Circle 99 on the inquiry card.

Infloor® Radiant Floor Heating Systems

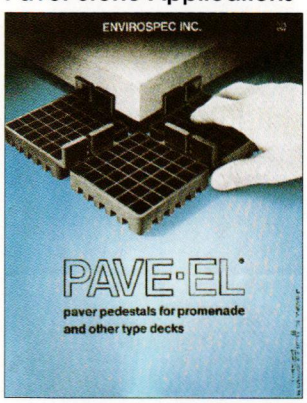


Bring barefoot warmth to your customers' homes. Specify Infloor - the only heating system that assures comfort with zoned heat control, individual room thermostats, a computerized design program and Therma-Floor® - the thermal mass designed to maximize energy efficiency. Ultimate efficiency, ultimate comfort - only from Infloor. For free Specifications Guide call 1-800-356-7887, or FAX 1-612-478-2431.

Infloor® by Gyp-Crete Corp.

Circle 100 on the inquiry card.

A Practical Solution to Roof Paver Stone Applications



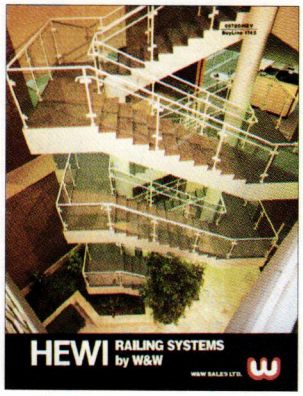
New bulletin shows a better way to transform a roof into a patio, terrace, balcony, walkway, plaza podium, promenade, or just plain roof deck, using the Pave-El Pedestal System. Designed to elevate, level, and space paver stones for drainage in any weather, Pave-El reliably protects roof, paver stone, membrane and insulation. Ellicott Station Box 119, Buffalo, NY 14205. 416-252-2090.

Envirospec

Circle 101 on the inquiry card.

Product Literature Showcase

Colorful Nylon Railings from HEWI by W&W

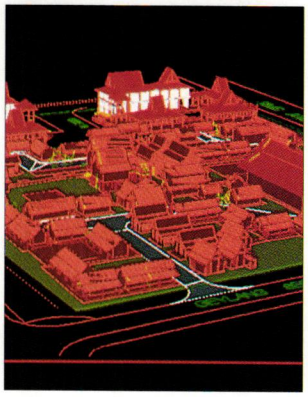


Stylish, strong railing systems can be custom designed from durable components in 13 vibrant colors. Virtually unbreakable solid-core nylon, colored throughout, is decorative, safe, hygienic, easy-care, pleasant-to-the-touch, resistant to chemicals and dirt-repellent. Ideal for all heavy traffic areas.

W&W Glass Products, Ltd.

Circle 102 on the inquiry card.

FastCAD® 3D-Includes DXF and RenderMan



FastCAD 3D can take you from plan to presentation in a single package. Selecting, drawing and editing entities have never been faster or easier. Why not optimize your design environment with FastCAD 3D's eight interactive windows, icons, and pull-down menus? Viewing three-dimensional objects is a snap from any position in hidden line, surface and animation modes.

Evolution Computing

Circle 103 on the inquiry card.

Traditional Metal Ornament



The artisans at Historical Arts and Casting specialize in the restoration and replication of traditional cast metal ornamentation. Our skilled craftsman work with a variety of material including bronze, aluminum, and iron. Please write or call for more product and service information:
4130 W. 1939 S. Unit F,
Salt Lake City, UT 84104.
(801) 974-0242.

Historical Arts & Casting, Inc.

Circle 104 on the inquiry card.

ADA Compliance Signage

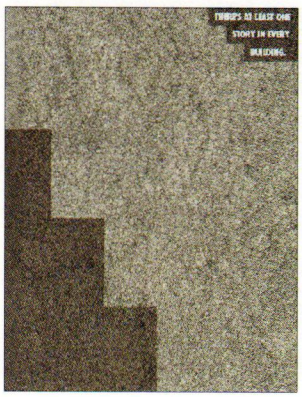


INNERFACE makes it easier for you to meet the new Americans With Disabilities Act (ADA) signage standards. INNERFACE offers (1) A variety of compliance signage, (2) National distribution, (3) Solid 21 year history and (4) Economical, attractive, and highly functional interior and exterior signage. For free literature call (800) 445-4796.

INNERFACE

Circle 105 on the inquiry card.

Vulcraft Steel Joists, Joist Girders & Steel Deck

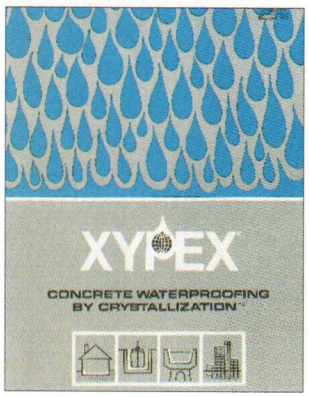


Colorful new 22-page brochure from Vulcraft, the largest producer of steel joists in the country. Brochure details the advantages of steel joists and joist girders. It also presents interesting case histories from across the country that document the use of Vulcraft joists, joist girders and steel deck in a wide range of buildings.

Vulcraft

Circle 106 on the inquiry card.

Concrete Waterproofing by Crystallization

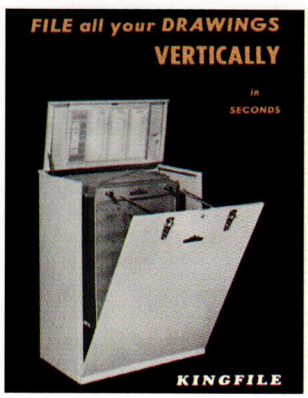


Applied as a slurry coating, Xypex is a chemical treatment that waterproofs by penetrating the concrete with a crystalline formation that 'plugs' the pores of the structure preventing water seepage. Xypex is ideal for use on the 'inside' of wet underground structures.

Xypex Chemical Co.

Circle 107 on the inquiry card.

Vertical Plan File

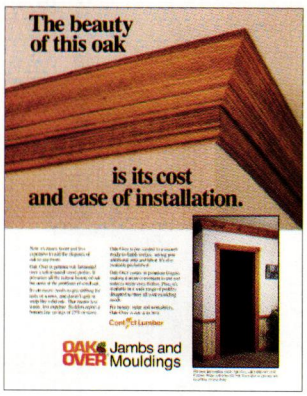


Stores up to 1200 drawings attached to suspension strips for single filing and/or metal hangers for multiple filing. You can store and retrieve your drawings in seconds without tears or smudges. Quality wood or steel KINGFILES are counterbalanced for easy access, 60% floor space savings, and lowest filing cost per sheet.

H. Schreiber Company

Circle 108 on the inquiry card.

Oak-Over Solves Twisting And Cracking

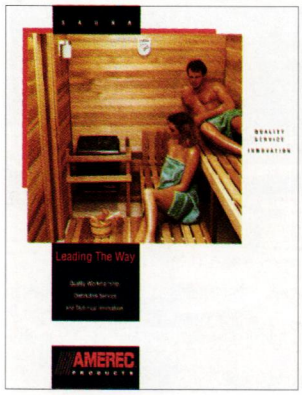


Oak-Over is red oak veneered jamb and moulding line laminated over a softwood substrate. This eliminates twisting and cracking yielding an installed cost that is easily 25% below solid oak. Oak-Over is a complete line of rich looking profiles that can be combined to achieve that elegant millwork appearance. Call Contact Lumber Co. 800-547-1038 for information.

Contact Lumber Company

Circle 109 on the inquiry card.

Amerec Sauna & Steam Quality Products since 1963

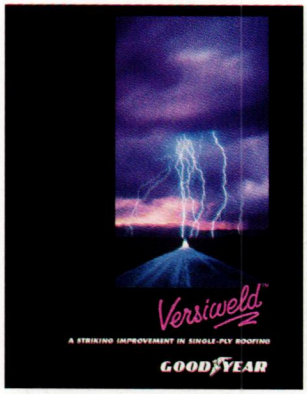


Amerec pre-cut and modular sauna kits can be customized to fit virtually any size room. All Amerec sauna rooms utilize grade A, kiln-dried Western Red Cedar for lasting beauty with proven durability and performance. Amerec products are manufactured with pride in the U.S.A. Please call 1-800-331-0349 to request an architect's specification kit.

Amerec

Circle 110 on the inquiry card.

Versiweld™ Single Ply Roofing Capabilities Brochure



Goodyear's Versiweld roofing systems are composed of a heat-weldable EP rubber membrane. Available in white for mechanically attached applications, or black for ballasted, Versiweld installs easily and offers superior resistance to tears, punctures and moisture. Warrantied for up to 15 years, Versiweld is perfect for both new and retrofit applications. Catalogs or product info, 1-800-992-7663. In OH 1-800-231-5867.

Goodyear Tire & Rubber Co.

Circle 111 on the inquiry card.

Parex introduces Insul/Crete Gold System

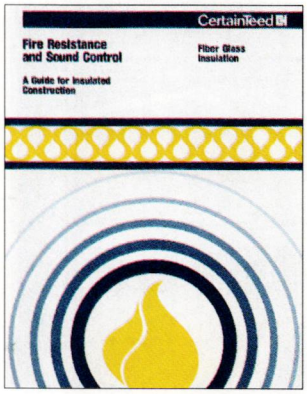


Parex introduces Insul/Crete Gold System, consisting of Extruded Insulation Board, Fiberglass Reinforcing Mesh, Mechanical Fasteners, Cementitious Base Coat & a choice of Finishes. I/C Gold is the first EIF system to combine design flexibility & simplicity of jointless polymer based systems with the benefits of mechanically attached extruded polystyrene insulation board. The I/C Gold system is ideally suited for renovation & new construction.

Parex, Inc.

Circle 112 on the inquiry card.

Sound Control and Fire Resistance Brochure

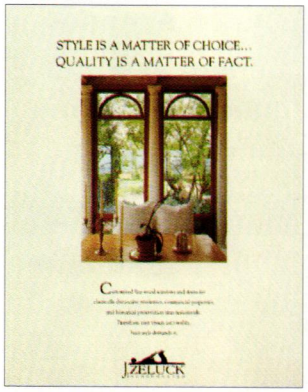


New 12-page brochure offers architects data on the sound control and fire resistance properties of fiber glass insulation. Explains terminology, details existing codes and states standard measurement procedures. Also contains detailed drawings of more common wall assemblies for buildings.

Certainteed

Circle 113 on the inquiry card.

Style is a matter of choice, Quality is a matter of fact.

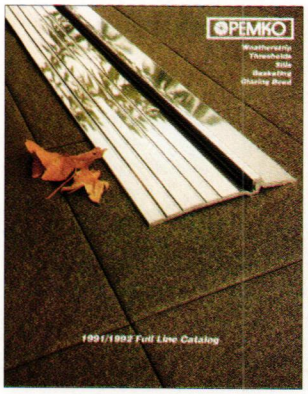


Zeluck offers customized fine wood windows and doors for classically distinctive residences, commercial properties, and historical preservation sites nationwide. Transform your vision into reality. Your style demands it. Call for our brochure at (800) 233-0101, ext. 18 or (718) 251-8060 ext. 18. Zeluck, 5300 Kings Highway, Brooklyn, N.Y. 11234. Offices in L.A., San Francisco, Aspen, & Florida.

Zeluck

Circle 114 on the inquiry card.

WEATHERSTRIP/THRESHOLDS DOOR SILLS/GASKETING

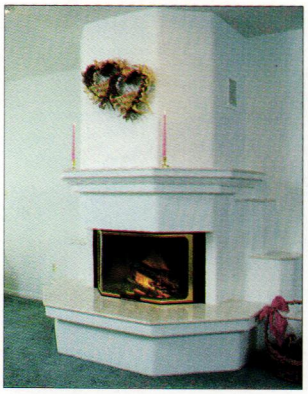


Pemko's (91/92) full-line catalog includes thresholds, sills, door bottoms, gasketing, astragals, coiled weatherstrip, & more. Pemko has introduced over 50 new products including non-handed reversible automatic door bottoms, adjustable thresholds, & a line of locking spring bolt astragals. Also added--2 popular new finishes: painted white aluminum & bright dip gold anodized aluminum. Pemko: 800-283-9988, Fax: 800-283-4050.

Pemko Manufacturing Co.

Circle 115 on the inquiry card.

RUEGG...For the World's Best Fireplaces

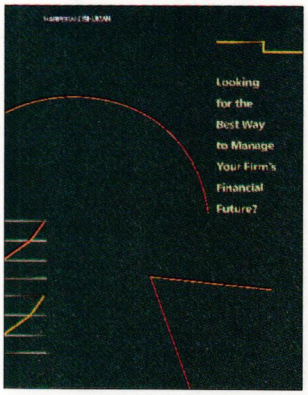


Deluxe Prisma or new Prismette. Swiss-built, energy efficient and heat circulating, these zero-clearance fireplaces with sliding, one piece glass doors offer homeowners the opportunity to return 38,000-55,000 Btu's/hr of clean refreshed air into up to three rooms. Once you've experienced a Ruegg fireplace there can be no other choice.

RUEGG Fireplaces

Circle 116 on the inquiry card.

CFMS (Computer-based Financial Mgt. System)



Harper and Shuman develops, sells and supports financial management software specifically for architects. The only system of its kind sponsored by the AIA, MICRO/CFMS runs on PCs and CFMS runs on the DEC VAX. A modular approach lets you buy only what you need. Call today 1-800-275-2525. Harper and Shuman, Inc.

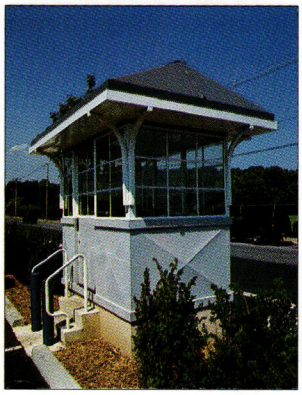
Harper & Shuman

Circle 117 on the inquiry card.

Product Literature Showcase

To Advertise Call 1-800-544-7929
Fax 212-512-4256

B.I.G. Catalog of 292 Steel Booth Models

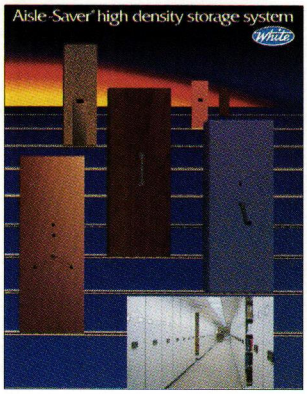


Pre-assembled & pre-wired, ready-to-install steel booths from B.I.G. Enterprises. We've been designing & manufacturing booths for over 20 years to blend pleasingly with any architectural style & ergonomic need. Easy to install, handi-cap approved, we deliver throughout the world. Call or write for your free catalog of 292 booth models. Call Dave King (818) 448-1449 or write 9702 E. Rush St., S. El Monte, CA 91733-1730.

B.I.G. Enterprises

Circle 118 on the inquiry card.

White Office Systems High-Density Storage



New brochure discusses White Office Systems' high-density storage systems that eliminate unnecessary aisles, producing a 50% saving of floor space. Suitable for offices, libraries, financial institutions, law firms, & other organizations where the cost of storage is important, Aisle-Saver systems allow the user to open an aisle wherever & whenver necessary, resulting in improved employee productivity, deferred moves & scaled-back expenditures.

White Office Systems

Circle 119 on the inquiry card.

WARMATOWEL™ - Ultimate Bathroom Luxury

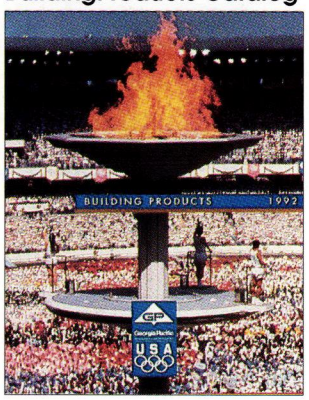


WARMATOWEL™ is a complete line of towel warmers specifically designed for use in the most upscale American bathrooms. Available in floor or wall models and eight contrasting or solid color combinations to suit designers taste. Contact WARMATOWEL at: 43-20 34th Street., Long Island City, N.Y. 11101. 800-767-8326.

WARMATOWEL™

Circle 120 on the inquiry card.

Georgia-Pacific BuildingProducts Catalog

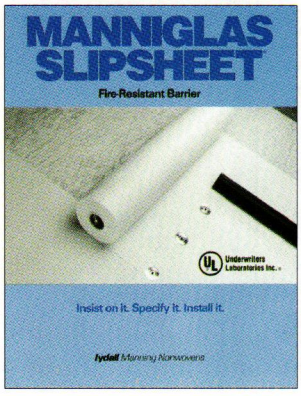


Inside, customers will still find extensive, up-to-date information about G-P's wide range of products in an attractive, easy to use format. Color tabs help direct readers to information on decorative panels, engineered board products, gypsum, hardwood plywood, insulation, lumber, metal products, millwork, roofing, siding, & structural panels. Detailed specification charts & suggested uses for each product, along with product highlights & dozens of full-color photos.

Georgia Pacific

Circle 121 on the inquiry card.

Manniglas Slipsheet® Fire Resistant Barrier

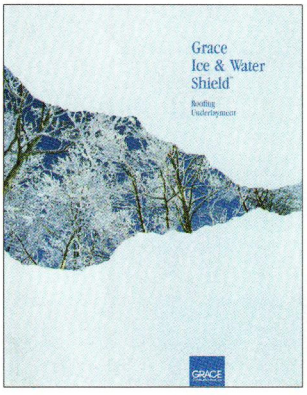


Roofing system brochure highlights company's unique Manniglas Slipsheet product, a lightweight flame barrier for U.L. Class A and B single-ply roofing systems. Manninglas Slipsheet is used over both combustible and non-combustible roofs to prevent penetration and spread of flame. For more information contact Lydall Manning Nonwovens: 518-273-6320.

Lydall Manning Nonwovens

Circle 122 on the inquiry card.

Protect Your Masterpiece With Grace Ice & Water Shield®



Featured brochure describes product & application uses & guidelines as well as product specifications. Using our sloped roof underlayment membrane is the most cost-effective, long-term protection against damage from ice dams & wind-driven rain. It's a tough, flexible, self-adhering membrane that installs easily under virtually every kind of roof & remains invisible, so it won't compromise the integrity of your design.

W.R. Grace & Co.

Circle 123 on the inquiry card.

Rolling steel door "Easytest" device

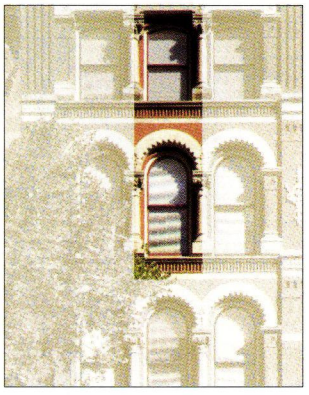


Saino has made it easy for you to meet fire codes that call for the periodic testing of rolling steel fire doors. Just a flip of the handle, and Saino's "Easytest" system automatically closes the fire door. Then, it's just as easy to re-set the door and the "Easytest" device in the open position. "Easytest" is available for new fire doors, or it can be retrofitted to existing fire doors. For catalog FD3, call 1-800-345-1899.

Saino Mfg. Company

Circle 124 on the inquiry card.

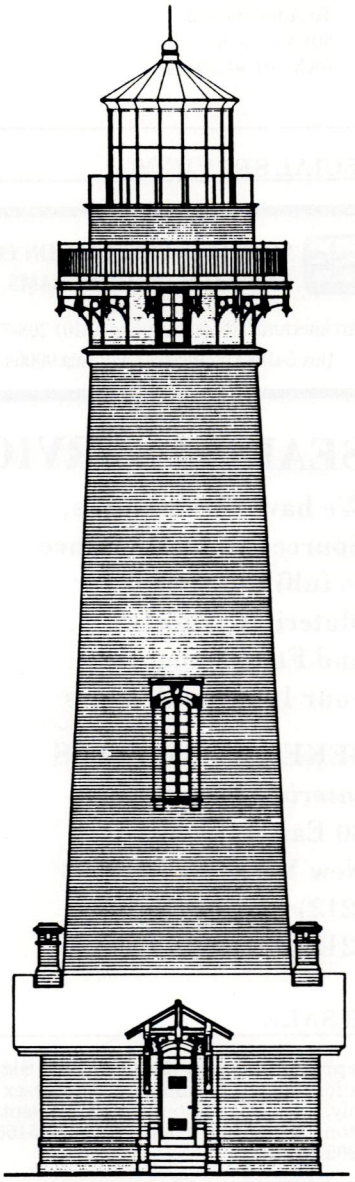
Marvin Windows' New Commercial Catalog



It describes the commercial capabilities of Marvin's entire line of wood and clad wood windows and doors. The catalog provides information on product styles, performance and design capabilities as well as Marvin's Architectural Support Department and other non-residential services. Also included is the Magnum Series, Marvin's premiere products for commercial applications. 8043 24th Ave. S., Minneapolis, MN 55425. 800-328-0268.

Marvin Windows

Circle 125 on the inquiry card.



PIGEON POINT LIGHTHOUSE, SAN MATEO COUNTY, CA.

PRESERVATION
PLAN ON IT

Planning on restoring a house, saving a landmark, reviving your neighborhood?

Gain a wealth of experience and help preserve our historic and architectural heritage. Join the National Trust for Historic Preservation.

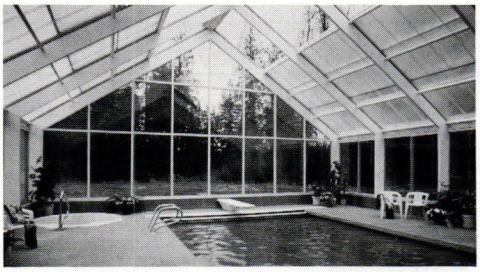
Make preservation a blueprint for the future.

Write:

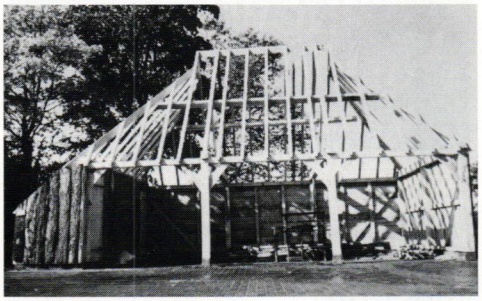
National Trust
for Historic Preservation
Department PA
1785 Massachusetts Ave., N.W.
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New Products

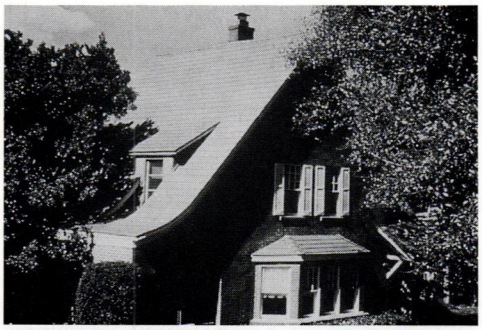
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342. Pool pavilion. The Classic 2000 glazed enclosure has a roof of insulating Danpalon translucent panels dry-glazed within a motorized retractable-roof system; in this application, the panels move downward from the ridge. Perimeter walls are glass. Clear Plastics International, Inc., Mundelein, Ill.



343. Traditional English. Eighteen different one- and two-story structures—based on historic British construction—are offered in pre-cut kit form. The post-and-beam frame is made of green well-boxed oak heartwood, with mortise-and-tenon joints secured with pegs. Options include crown-post roof, jowl posts, and mullioned windows. Open bays permit flexible partitioning. English Heritage Oak Buildings, Wadhurst, England.



344. Reroof option. The Homecrest aluminum shingle, a new style, has an authentic slate, shingle, or tile texture, offered in five colors. The lightweight, individually fastened pieces are installed from the ridge down. Alcoa Building Products, Sidney, Ohio. ■

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Manufacturer Sources

For your convenience in locating building materials and other products shown in this month's feature articles, RECORD has asked the architects to identify the products specified.

Pages 82-89
House on a Ranch
David Morton Thomas Cordell Architects
Pages 82-87—Corrugated metal siding and roofing: ASC Pacific. Aluminum-framed windows: Mercer Industries. Skylights: Glass and Sash. Wood-grille and rolling doors: fabricated by Petro Construction.
Pages 88-89—Sliding sunscreens: Kirsch (Paneltrac System, unbleached canvas panels). Fireplace: custom by architects, fabricated by Malm Fireplaces. Cement-floor finish: Glitsa American. Downlighting: Lightolier. Refrigerator: Sub-Zero Freezer. Dining chairs: Brickel Associates (University Chair by Ward Bennett). Desk lamp: Luxo. Hanging lamp: Akari. Sink: Kohler. Cooktop: Kitchen Aid.

Pages 96-101
Dennison/Peek House
Brooks & Carey Architects
Sash and awning windows: Marvin. Shingles: Bird & Sons. Wood doors: Morgan Products. Metal doors: Brosco. Locksets: Schlage. Hinges: Stanley. Stove: Austroflamm USA. Dining table: custom by architect, fabricated by Len Schmidt. Ladderback chairs, custom by architect, fabricated by Ken Schoen. Lighting: Killark; Prescolite; Stonco.

Pages 102-109
Root Guest House
Steven Harris & Associates, Architect
Roof: Terne-coated stainless steel, fabricated by Greg's Roofing. EIFS: Sto Industries. Custom wire-mesh railing: Atlas Welding. Paint on gates: Hammerite. Windows: Marvin Window (Magnum Tilt/Turn). Pool mosaic design by Lucien Rees-Roberts; glass tile fabricated by Italmosaic.
Pages 108-109—Dining table: Roger Crowley. Chairs: Donghia. Plumbing fixtures: American Standard (Warren Platner).

Pages 110-117
House for a Film Producer
Smith-Miller + Hawkinson Architects
Low-E glass: Libbey-Owens-Ford. Retractable awnings: Astrup (Solair). Fabric: Unitex (Sunsure). Aircraft-hanger doors: Wilson Industrial Door. Custom structural components: Classic Metal Design. Eames chairs: Palazzetti. Carpet: V'Soske. Refrigerator: Traulsen. Downlighting: Edison Price. Dining-room lighting: Atelier International. Sliding-door hardware: Grant. Cabinet hardware: Allgood. Skylight: Bristolite.

Pages 118-123
Wright House
James Cutler Architect
Decorative connectors: custom by architect, fabricated by Noreastern Trall. Roof: Western Red Cedar. Casement windows: Northwest Window Works. Glazing: Southwall Technologies (Heat Mirror 88). Cherry cabinetry: custom by architect, fabricated by Rockledge Builders. Stove: Ras.

Pages 124-131
Corson-Heinser Live/Work Building
Tanner Leddy Maytum Stacy Architects
Cement-board cladding: Eternit (Eflex panels). Steel-frame windows: Torrance. Aluminum windows: Ventana. Upward-acting doors: Raynor Mfg. Flooring: Masonite Corp. Locksets: Schlage. Hinges: Hager.

Pages 132-139
Barton House
Mockbee/Coker/Howorth, Architects
Glass: PPG Industries. Storefronts, operable windows, and entrance: Kawneer. Corrugated-aluminum cladding: Fabral Corp. Paint: Benjamin Moore. Glass block: Pittsburgh-Corning. Metal roofing: ASC-Pacific (Galvalume). EPDM roofing: Carlisle Syntec Systems. Fans: Hunter Fan. Track-mounted downlights: Halo.

Pages 140-145
Reorganized Church of Jesus Christ of Latter Day Saints Temple
Helmuth, Obata & Kassabaum, Inc., Architects
Stone: Cold Spring Granite (Rockville Beige and Oconee granites.) Stainless-steel roof, fascia, cladding, steeple skin: A. Zahner Sheet Metal. Ribbon windows: design by Triteq, fabricated by Marmet. Skylight: Skyline Skylight.

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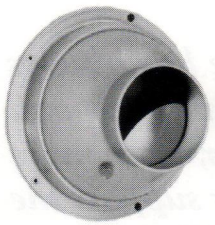
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